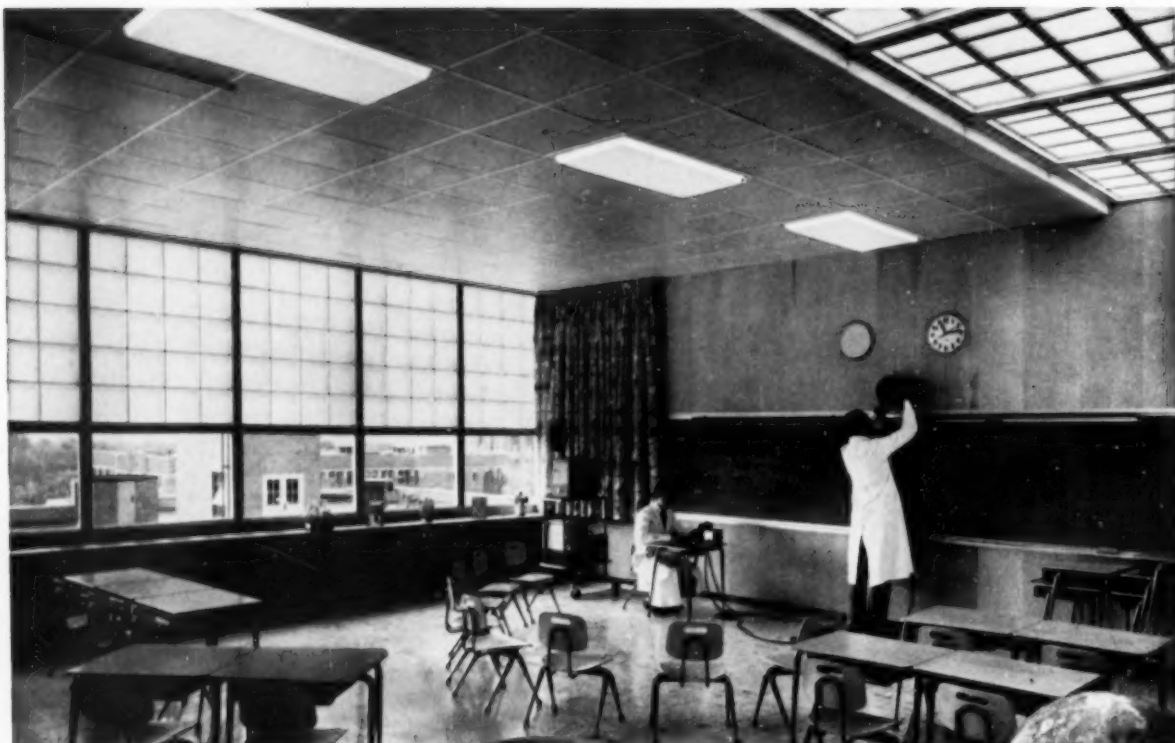




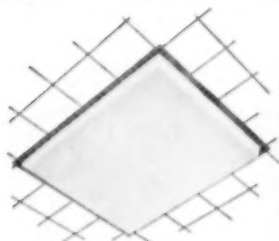
College AND UNIVERSITY Business

**APRIL 1954: Student Loan Practices • Profitable Summer
Conferences • Annual Report Techniques • Waterproofing Masonry
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Research Laboratory Classroom, Daylighting Laboratory, University of Michigan, Sponsored by Owens-Illinois Glass Co.

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The photo shows three (of four) 2' x 4' recessed Beta-Plex units mounted almost in the center of the ceiling, under which the low point of daylight falls. For schools whose classrooms are used at night, a different arrangement of Beta-Plex units is recommended, with separate circuits and switches to permit full (night) or partial (day) use. For an illustrated, descriptive 8-page folder on Beta-Plex, write to The F. W. Wakefield Brass Company, Vermilion, Ohio. In Canada: Wakefield Lighting Limited, London, Ontario.

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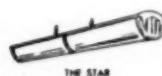
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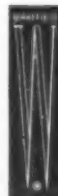
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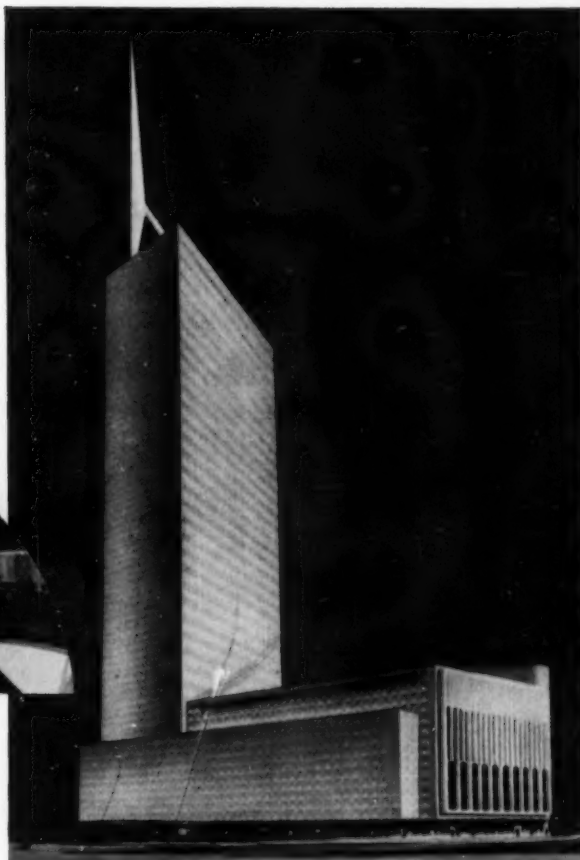
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Vol. 16, No. 4, April 1954

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Among the Authors



Rupert A. Hawk

RUPERT A. HAWK, treasurer of Grinnell College, secretary of its board of trustees, and associate professor of economics and business, describes on page 26 the procedures followed there in the successful scheduling of summer conferences. Mr. Hawk's career has been entirely within the Grinnell area, beginning in 1923 as a public school teacher. Prior to that he had been a golf professional for two years, following his graduation from Grinnell College. In 1929 he received his law degree from Drake University and practiced law. From 1937 to 1947 he was superintendent of schools in Grinnell, Iowa, at the same time serving as associate professor of education at the college. He became controller of the college in 1948 and in 1949 was named to his present position.



George Baughman

GEORGE BAUGHMAN, business manager of the University of Florida, outlines on page 32 methods by which an annual report can be effectively dramatized through proper use of illustrative material. Mr. Baughman has been at Florida since 1945, when he was named assistant business manager. During the war he was a supply officer in charge of the lend-lease program of the U.S. Navy for a period of four years and was co-author with the late Edward R. Stettinius in the writing of the book "Lend-Lease, Weapon of Victory," published in 1944. His navy assignment provided him with six years of travel overseas, including visits to more than 60 countries.



Ruel J. Taylor

RUEL J. TAYLOR, college plant adviser for the California State Department of Education in Sacramento, discusses in considerable detail on page 38 the planning involved in the Long Beach State College campus. Mr. Taylor has been in his present position since 1949; for a two-year period prior to that he was administrative assistant for the Sacramento city school system. From 1941 to 1945 he served as an instructor in law at Sacramento College. Like most West Coast residents, he enjoys outdoor life, particularly hunting and fishing. He also shows an artistic sense through his interest in music. He was formerly solo cellist for the Sacramento Philharmonic Orchestra.



Marjorie E. Tiernan

MARJORIE E. TIERNAN, food service director of the Student Union at the University of Washington, Seattle, suggests on page 49 the techniques that have been utilized in promoting the sale of food specialties. Before accepting her present appointment in 1950, she had a wide experience in both commercial and institutional food service. She began her professional career as a college apprentice at the Hyde Park Y.M.C.A. in Chicago, later becoming assistant manager of the Daily News Building cafeteria in the same city. For three years or so she was traveling supervisor in Chicago's Loop for the Walgreen Drug Company, a position she left to become food service director at the Y.M.C.A. in Omaha, Neb. Subsequently she served as food director of the University of Nebraska's student union building. Special human interest item: Wedding bells are ringing in a change of name—to Mrs. T. W. Kridler.

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Questions and Answers

Observing Holidays

Question: What arrangements should be made for work schedule of stenographers when a legal holiday occurs on Saturday or Sunday when they are not working on those days?—J.C., Tex.

ANSWER: If a legal holiday falls on Saturday or Sunday, when office employees are not scheduled to work, we do not give additional time off with pay unless the president has declared that all offices shall observe the holiday on Friday or Monday. He usually follows the general practice of business houses and offices in the community.—CHARLES W. HOFF, *vice president, University of Omaha.*

Cooperative Fund Raising

Question: How much can we expect of cooperative fund raising in financing higher education?—M.D., Miss.

ANSWER: A great deal may be expected of cooperative fund raising, particularly that which is directed toward obtaining gifts from corporations, although broader solicitations are being made successfully by some groups, such as the United Negro College Fund. There are now 29 state and regional associations formed for the purpose of corporate solicitation.

The Smith case recently decided in New Jersey has upheld the right of corporations to contribute to higher education. Although the Supreme Court of the United States refused to hear an appeal on the ground that the question was one for state courts, it is assumed that the case will be followed in other jurisdictions that have not already approved gifts by corporations.

In 1950, corporations gave \$252,000,000 to all causes, which represented only 0.6 per cent of net profits, although up to 5 per cent is tax deductible.

Your guess as to how much cooperative fund raising will amount to is as good as mine, but certainly corporate executives are becoming more and more aware of the need to support higher education and their response

to the cooperative effort of college associations may be a determining factor in financing higher education in the years ahead.

I suggest you refer to a brochure, "The Role of Corporations in Aiding Higher Education," published in November by the recently formed Council for Financial Aid to Education, Inc., 6 East 45th Street, New York 17, N.Y., in which will be found a more nearly complete answer to your question as well as a bibliography on the subject. Incidentally, composition of the board of the council is emphatic proof of the importance attached to corporate giving by leaders of industry as well as of higher education.—BRUCE POLLOCK, *business manager, Carleton College.*

Loss of Silverware

Question: Is there any practical way to reduce loss of silverware owing to theft by customers?—E.M., Ill.

ANSWER: The theft or "borrowing" of silverware by customers seems to be an item of operating expense almost everywhere. Any precautions taken would depend on the type of institution in which you work.

One hospital, losing a great deal of hollow ware, stamped each piece "in memory of or donated by" and the results were amazing.

In routine residence hall operations many places have found that not mark-

ing flatware with the name of the school or hall has made it less tempting to souvenir hunters.

Also, many times a close working relationship between the housekeeping department and the food service will result in all silver taken to student rooms being promptly returned. If time is not too important a standard amount of silver, e.g. two spoons, knife and fork might be wrapped in the napkin. This, as a rule, would demand a heavy paper or cloth napkin, in itself an added expense. The customer picks up the rolled silver, thus eliminating the dropping of an extra spoon or so into a pocket. Used silver may be wiped off and taken away but it is not nearly as likely to be done.

Sometimes posters will appeal to student morale. For example: pieces of silver furnished with wings flying out the door or into the garbage can with a slogan as to their cost and the reminder that the expense might have been used to furnish steak on a residence hall menu, or to cut the cost if an à la carte cafeteria.—CHRISTINE RICKER, *director of food service, Stanford University.*

Post Office Substation

Question: What arrangements have to be made to have a campus substation designated as a U.S. post office? What subsidy or other considerations are involved?—P.R., Ill.

ANSWER: You have come up with a \$64 question. At the E.A.C.U.B.O. meeting in Washington, there was considerable discussion from the floor on this very question, and everyone seemed to have a different answer. As far as I can figure: (1) A college has to prove that a substation is needed. (2) The government will pay as little for quarters as it can get away with. (3) The institution has to furnish the boxes, heat, light, and so forth. (4) Then when you get all through, it boils down to a point of appealing to a congressman and having him intercede for you.—JOHN W. S. LITTLEFIELD, *treasurer, Colgate University.*

If you have a question on business or departmental administration that you would like to have answered, send your query to COLLEGE and UNIVERSITY BUSINESS, 919 North Michigan Avenue, Chicago 11, Ill. Questions will be forwarded to leaders in appropriate college and university fields for authoritative replies. Answers will be published in forthcoming issues. No answers will be handled through correspondence.

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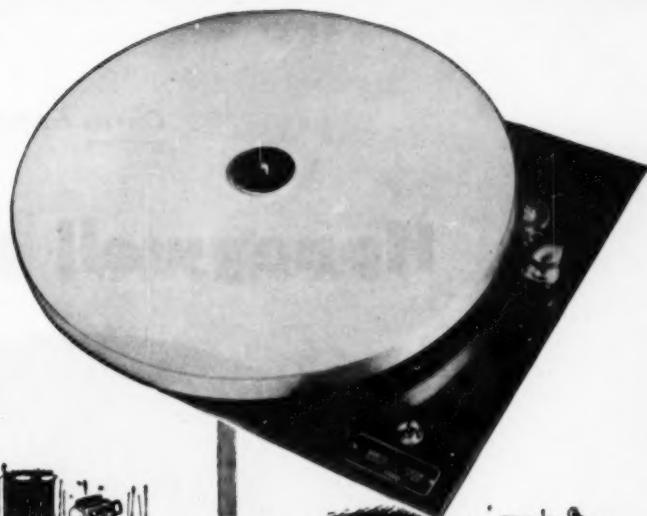
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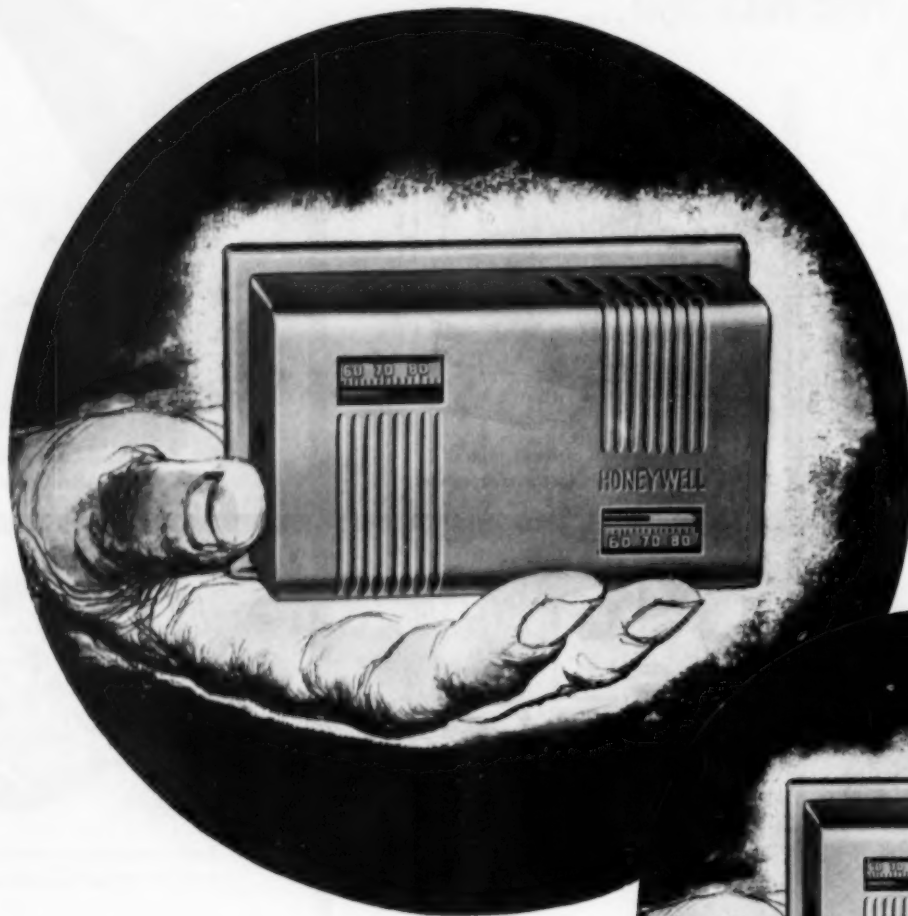
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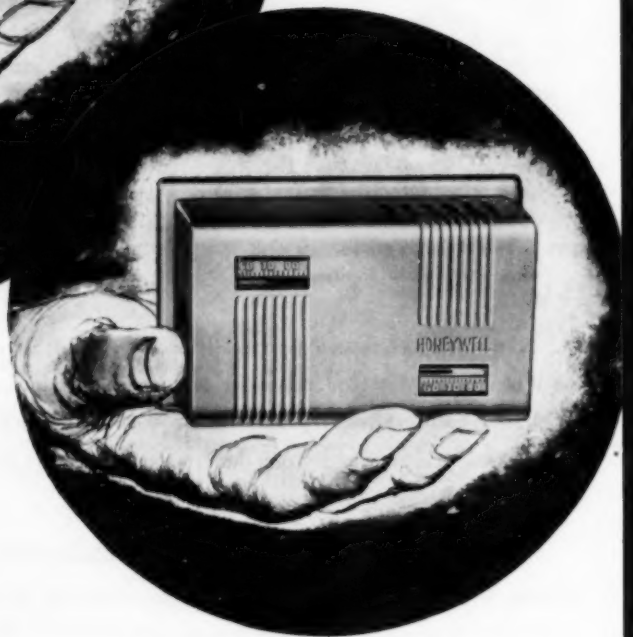
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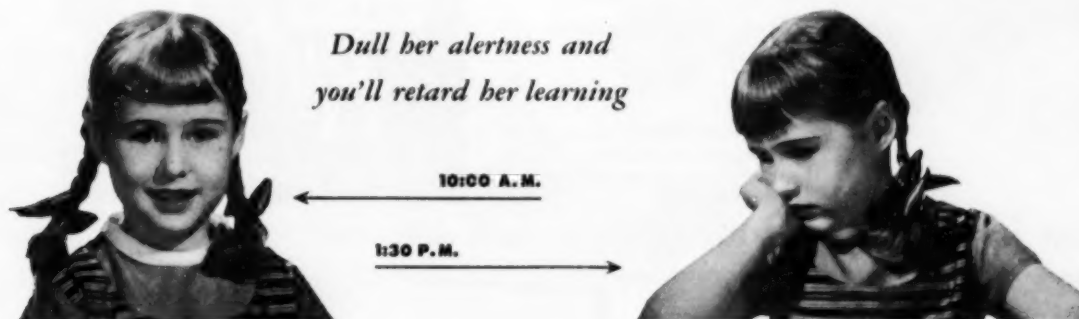
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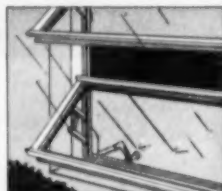


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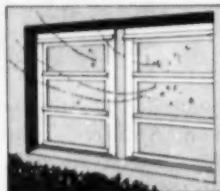
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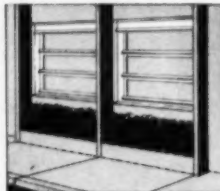
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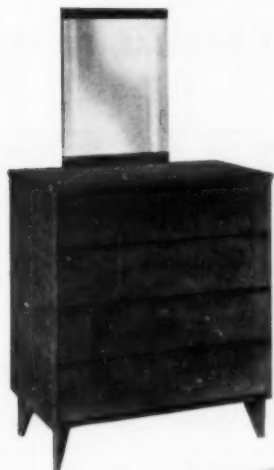
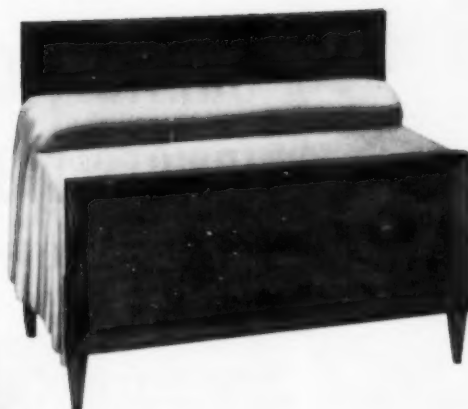
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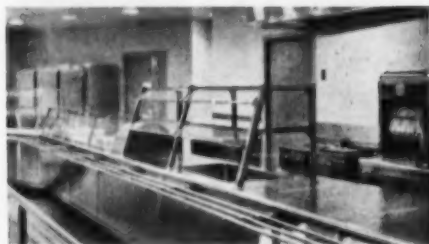
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ideas

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FLOOR PANTRY—showing Blickman-Built food conveyor. Note stainless steel serving counter with round-corner bottom. Pantries have complete service facilities.



CAFETERIA—close up of stainless steel serving counter. Round-corner bottom, seamless top, welded tray slides, elimination of horizontal trim—all promote cleanliness.



FUNCTIONAL DESIGN AIDS SANITATION in main dish pantry. Stainless steel clean dish table with built-in round-corner sink. Wall-mounting eliminates leg obstructions, facilitates cleaning. Welded tubular undershelf is suspended from dish table, leaving floor clear.

sanitary construction lowers maintenance costs

AT BAYLOR UNIVERSITY HOSPITAL, DALLAS, TEXAS



MERIT AWARD
Institutions Food Service Contest

GENERAL VIEW OF MAIN KITCHEN—showing food conveyors lined up opposite cook's tables. When loaded, conveyors are wheeled to elevators and taken to individual floor pantries. Stainless steel cook's table typifies sanitary construction of all equipment, featuring round corners, rolled edges, seamless crevice-free surfaces. Note built-in bain marie.

• The stainless steel equipment in this prize-winning installation features construction details which reduce time and labor required for cleaning. For example, wall-mounting of sinks and dish tables leaves floor areas unobstructed for rapid, thorough cleaning. Stainless steel pipe enclosures prevent accumulation of dirt and grease on inaccessible surfaces. Welded tubular undershelves are readily cleaned on all surfaces. Round-corner sinks, rolled edges and seamless stainless steel surfaces facilitate cleaning by eliminating dirt-collecting crevices. Such details help maintain the highest standards of hospital sanitation. In addition, durable welded structures assure years of repair-free service life. Maintenance costs are low as a result.

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Designed and equipped by S. Blickman, Inc., this installation won a Merit Award in a recent Institutions Food Service Contest. You, too, can realize substantial savings in labor and maintenance costs by specifying "Blickman-Built."



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WORK TABLES

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St. Charles-equipped food laboratory in new Riverside High School, Riverside, Illinois.
Mrs. Treva L. Kelly, Instructor of Home Economics.

Multiple home kitchens form modern food laboratory custom-built of steel by St. Charles



The unique layout of this recently installed school unit offers unusual advantages to students and Home Economists alike. It conforms with the current instructional trend toward duplication of ideal home conditions in the food laboratory. Units may easily be employed simultaneously in class participation, or individually for special assignments. Activities in each "kitchen" are under constant, easy supervision of instructor, with round-end units allowing convenient passage. Storage of equipment is normal and home-like, avoiding the confusion of central storage

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Can a College Be Helped by a Management Consultant?

RICHARD M. PAGET

Management Consultant, New York



THE FUNDAMENTAL PURPOSES OF A COLLEGE OR university remain the same, regardless of the passage of time. Whether we look at the ancient and revered colleges at Oxford and Cambridge or the most modern American liberal arts college or state university, we come to the same conclusion. An institution of higher learning is created to disseminate knowledge, to perform research, and to serve as an instrument for the advancement of culture in the community and the world. Thus, it is composed of a company of scholars dedicated to the advancement of the human mind and spirit. All else is secondary.

If we could place such a concept in a vacuum, it would be necessary to consider how a management consultant can assist this educational and cultural process. Obviously the management consultant is not qualified by profession to concern himself with the academic deliberations of a company of scholars. But it was recognized as far back as the period of the Renaissance and perhaps even earlier that the development of a spiritual and intellectual body requires a corresponding development of sturdy, practical sinews which enable that body to function creatively and so bring about human growth.

To our day the problem has not changed. It has merely become more complicated and therefore more difficult to control. Every economic and social change that occurs today impinges upon the chances for survival of our cultural institutions. Alterations in the tax structure, rises in living costs, relations between management and labor—these and many others have immediate and direct effect upon colleges and universities just as upon our lives as individuals. To perpetuate and strengthen the cultural activities and contributions of our colleges involves us in problems of finance, food and housing, maintenance, recruitment of students, public relations, and administrative procedures. According to the 1952 report of the Committee on Financing Higher Education, our private liberal arts colleges are expending 39.3 per cent of their total budgets in administrative and other non-instructional areas. While these areas relate to the educational objectives and program of an institution, their operation can and must be facilitated by the adoption of management controls and procedures

similar to those of successful business enterprises.

Corporations, government agencies, or philanthropic individuals who now support or are tempted to support a college or university are sensitive as never before to the necessity for it to function economically and with proper administrative management. They are unwilling to provide funds in instances where they are not sure that monies presently available are being used to maximum advantage. They are increasingly critical of obsolete methods that are defended merely because of the educational character of the institution. In short, they are anxious to have assurance that the institution is making full and effective use of all the resources available to it.

The management consultant, therefore, properly can be of assistance to the college in the refinement of its administrative and other noninstructional functions. Assuming that he has an understanding of the unique problems to which educational organizations fall heir, he can present methods and technics that have been tested in other fields and show college authorities how these may be adapted more readily to their needs. He will avoid interfering with the educational philosophy or program, although his work may sometimes stimulate the college to a re-examination of such matters on its own. Rather, he will bring the kind of expert knowledge that increases the opportunities for the institution's survival and growth, and thus add to the likelihood that the concept of a university as a community of scholars will continue to be a reality.

In addition to the technical tools that the management consultant can offer to the college, he brings another valuable service in that he maintains an objective and a comparative point of view. He is not subject to the emotional influences that may influence some administrators as they survey their own situations. He can recognize and honor traditions, but still remain free of sentimentality.

The strength of the modern college rests, as always, in the intellectual power of its faculty. The management consultant not only *can* help in maintaining and increasing this strength; he must help. It is his mandatory responsibility to the cause of higher education in America.

Looking Forward

Economy Package

THIS SEASON'S SCHEDULE OF COLLEGE ADMINISTRATORS' conferences offers an unusual opportunity for a conveniently timed tour of important meetings. It is of particular significance to the administrator of a small college who doubles or triples in brass.

In the Middle West the administrator can start at the Association of College Unions meeting in Chicago April 25 to 28 or at the annual meeting of the Central Association of College and University Business Officers at Stillwater, Okla., April 25 to 27, and then on to California. In Pasadena the Association of Physical Plant Administrators will be in session May 3 to 5; the National Association of Educational Buyers will be in the same town on May 5 to 7. If the administrator has some energy left he can continue up the California coast to the annual meeting of the Western Association of College and University Business Officers to be held at Palo Alto May 9 to 11.

If the administrator comes from the South he can begin with the annual meeting of the Southern Association of College and University Business Officers in Raleigh, N.C., April 28 to May 1, and then jump to California. Another possibility is for him first to attend the annual meeting of the American Association of College and University Business Officers at Jefferson City, Mo., May 2 to 4, and then complete the circle tour to California.

The convenience and economy of sitting in on the meeting of the superintendents of buildings and grounds and also the purchasing agents' group during the same week in the same town offer an economy package that will be attractive to many. Rarely has it been possible to cover four different college administrators' conferences of this type within a 10 day period and do it so conveniently.

Professional Accreditation Problem

FOR MANY YEARS COLLEGE ADMINISTRATORS HAVE been concerned with the multiplicity of accrediting agencies and their interference in professional fields of study. Though these agencies have improved the quality of professional education, certain features of their operation have come in for justifiable criticism.

A major criticism has been that the agencies, by attempting to impose standards of conformity, have tended to invade the jurisdiction of the legally constituted gov-

erning body of the educational institution. As a result, in some cases undue attention has been devoted to the methods by which an institution has achieved its objectives and too little attention has been given to the results attained.

The National Committee on Accrediting was created a short time ago to help clarify a situation that was becoming increasingly confusing, time consuming, and expensive. One of the recommendations of the National Commission is that the several regional accrediting agencies take the initiative in working with the professional agencies to bring about improvement in the total accrediting situation. The North Central Association of Colleges and Secondary Schools, through its committee on professional education, has made some specific recommendations that merit consideration by college administrators and other regional accrediting organizations.

The North Central Association's committee has proposed that a college or university expecting a visit from representatives of a professional accrediting agency would notify the North Central Association. The association would then arrange for a generalist (a person competent to appraise general institutional objectives, problems and relationships within which professional instruction and research must be comprehended and coordinated) to accompany the team of examiners sent by the professional agency. According to the plans of the North Central Association committee, the generalist would be selected from the administrative staff of a member institution. He would participate in the deliberations of the examining group, his function being to consider the relationships of the professional education program to the general institutional program and to the objectives of the institution being evaluated. To the National Commission on Accrediting, he would submit a report, a copy of which would go to the chief administrative officer of the college or university. His report would serve as a basis for discussion with professional agencies, looking toward modification, when desirable, of the procedures and regulations of these groups.

A second proposal made was that institutional administrators report those practices of accrediting agencies they consider objectionable, as well as those they find to be most effective. It is anticipated that out of these two proposals there might evolve a set of principles to govern the activities of professional accrediting agencies that would be acceptable to all parties concerned.

All departments should be treated alike when it comes to matters of the budget. The business officer must explain the institution's policies to the department heads.

WHEREVER AND WHENEVER TWO OR more people deal with one another, we have public relations. Good public relations result when these dealings leave both parties mutually satisfied with the experience. On this premise it appears that the business offices of colleges and universities may be assumed to be involved in a public relations program, for these offices are constantly dealing with people. Moreover, they have a direct relationship in the interpretation of their institution to an audience that has a direct reaction upon the future of the institution involved.

Let us first define the scope of the business for the purpose of our discussion. We feel that it should include the business manager, the purchasing agent, the maintenance department, and/or the superintendent of buildings and grounds. At some schools these departments may be combined under one administration office; at others, each may be directly responsible to the general administrative office of the institution. Regardless of the organizational structure on a given campus, all of these departments have a common approach to be considered.

Representatives of no other administrative area of a college or university meet such a varied public as do the business office and its affiliates. These publics include the internal operations of the business office itself; relationships with the administrative structure of the school; contacts with the faculty; activities of the students, and finally—purposely so—the off-campus public. Perhaps there are others.

Because of the complexity of these relationships, in a very real sense the business office must be all things to many groups. Yet it appears that not much conscious thought has been given to both the problems and the opportu-

From a paper presented at a meeting of the Indiana Association of College and University Business Officers, Purdue University, October 1953.



You'd better be good— in public relations

HERBERT W. KNOPP

*Coordinator of University Relations
Valparaiso University, Valparaiso, Ind.*

nities arising from such relationships. Perhaps this may be due to the popular misconception at certain institutions that the business office is a necessary evil.

Consider internal operations first. Does your office possess esprit de corps? While it may be true that there is little glamour in purchase orders, departmental budgets, statements, balance sheets, or delinquent accounts, yet such a lack often may be a result of undesirable personnel relations. We are not living in a day of abstraction. People are not machines. Employees like to feel that they are part of an organization. This means that each person associated with your office should definitely know how his or her duties fit into the overall operations of the office. While it is true that the "six hundred" did not question the why of their ill-fated

charge, yet the poet left no doubt as to their fate. Don't expect your people to share that fate. They won't do it. It's important to show appreciation for work well done. A friendly word of commendation is worth a thousand words of criticism. If criticism is necessary, the reasons for the correction should be carefully explained.

Employees should be treated as associates. The first person plural is always more effective than the first person singular. Employees should feel that you are thoroughly familiar with their individual assignments and the problems involved in the discharge of their duties. They should also feel that you are genuinely interested in their personal welfare both on and off the job.

A few concessions inaugurated by you will merit their full loyalty, whether it is the "coffee break," a half-

day off to do Christmas shopping, or time off to take a sick youngster to the doctor. Anticipate such opportunities; you will find this far more effective than if they have to ask for time off. Cooperate willingly, never grudgingly. When you have convinced your office force that you are for them, first, last and always, you'll reap the extra dividends that will enable you to take care of peak loads of work. Unconsciously, your staff will be for you first, last and always.

Now consider your relationships with the rest of the administration. This includes your superiors as well as those departments on the same level. Basically, these relationships are an attitude of mind within yourself. If you feel with the late Will Rogers that you never met a man you couldn't like, you'll have no trouble in this area of public relations. Most of your troubles, if you have any, quite likely result from a lack of appreciation of the other person's point of view and the reasons for his attitudes. Perhaps you are absolutely convinced that the athletic director is a heel, and you may be positive that his activities are going to bring about an investigation of your institution from the N.C.A.A. Yet, unless you know the complete picture, the possibility exists that he is doing a splendid job.

SHARE PROBLEMS

Take time out to indulge in interdepartmental conferences. Let your administrative associates share their problems with you just as you share yours with them. By assuming that the entire administrative setup of the institution shares a common goal, you can do much to eliminate interdepartmental misunderstandings, friction and jealousies. If such a sharing of problems doesn't exist now, you will be doing your school a tremendous service by taking it upon yourself to initiate them in the areas of your interests. No organization can move forward without a unanimity of thinking in the solution of the problems that face it.

To be sure, this isn't always simple, particularly when you deal with the faculty. If it is true that there exists such a distinct entity as "the academic mind," it is your responsibility to cope successfully with it. You will do well to remember that the average faculty person has had little experience with business procedures. I know of no ready formula whereby you can improve your relationship with the faculty as a group

except to create in its members the conviction of absolute integrity and fairness on the part of your office. This means that you will treat every department alike; there can be no "pets" when it comes to matters of the budget. You'll have to explain your policies to them; and you'll have to be sure you are right.

On the other hand, it is my observation that the majority of college teachers feel obligated to be critical. To cope with this, you will have to be patient, listen well, agree on nonessential matters for the sake of their critical approach, avoid arguments, and forget any unkind references to the evils of your area of responsibility. Never forget that there exists the remote possibility that they may be able to contribute something useful to the more effective operation of your office.

There may be times when you can render personal service to the faculty. I can conceive of situations in which the business manager helps new instructors establish credit, makes advantageous purchases (when community relationships are not endangered) and is of other assistance. Such services are long remembered and may well save the institution money in subsequent budget requests from that individual. While there may be the chronic discount seeker, yet for the few of this type you will be amply repaid in institutional loyalty on the part of the great majority. And in these days of low faculty salaries, you need to work toward such loyalty through permitting the professor to enjoy a few advantages that may be made possible through your office.

Your relationship with the students may be more indirect. You don't meet them in the classroom. Most of your contacts have to do with the tuition and fees, housing and food. Most bad public relationships result from misunderstandings. Students don't know what is required to operate a college or university. It is not a good policy to keep them ignorant. Some day they will be alumni and as such they may be in a position to correct the very conditions that may now irritate them.

If your tuition fees seem high, use the conference method of explaining to campus leaders just why you must charge as much as you do. If some other fees prove objectionable to students, employ the same procedure. The same applies to food, which is possibly the most criticized part of campus life. Invite a student committee to meet

with the dining hall directors. Much good will come of it. Maybe the students do have a legitimate gripe, and if they do, your office should be eager to eliminate the cause.

Perhaps your campus is in a small community where social and recreational opportunities are limited. We have that situation at Valparaiso, and the students were quite unhappy about it just as were we of the administration. After a number of conferences with student leaders at which we explained our needs for other facilities, the students challenged us. They volunteered to assess themselves an additional fee of \$15 a semester if we would arrange to float a bond issue for a \$750,000 student union. With this additional fee, they agreed to assume the full cost of this building, which is now under construction. It was made possible for us without any cost to the university except the collecting of the fees and the handling of the bonds. And it all resulted from student gripes followed by our sharing with them the problems of our future.

PROSPECTIVE CONTRIBUTORS

Parenthetically, it should be noted that students who contribute \$30 a year to this project while on our campus are excellent prospects for continued contributions after they leave, a situation with tremendous implications for the school's future as reflected in the supervision of the budget in the business office. Incidentally, at Valparaiso the business manager was invited by the students to be a member of all planning committees for the college union, and our president wisely is encouraging a full measure of student participation in this activity. As an aftermath, many of the perennial gripes of the students are nonexistent this year. It is their university; they are helping to build it. And I suspect they know that in any future dissatisfaction, they will be given all the facts and will be provided an opportunity to help solve the situation.

We have used this much space in discussing public relations on the campus because we are convinced that, if our relationships are sound internally, they will take care of themselves off campus. Yet there are areas in which negligence is sometimes apparent.

If the business office or its affiliates are responsible for all business relationships, then the problem is clear, whether these relationships involve delinquent accounts, purchases of equip-

ment, food, or such problems as insurance. Once again, the problem is one of mutual understanding.

Suppose it is a delinquent student account. Simple dunning is never satisfactory, even when it brings in the payment. You must take the time to explain to the student why you need the payment, how salaries and services enjoyed by him are or were dependent upon the obligation, and then, ask his cooperation. You can even suggest a way that will enable both parties to benefit, such as budget payment of the bill. Every school needs every friend possible; you must not destroy friendships by inconsiderate approaches.

Or perhaps you are faced with a community problem in your purchases. You can fulfill certain of your needs much more advantageously outside your trade area. But before you place that order, call in your local supplier and tell him the whole story, also pointing out your obligation to the school. Ask his advice as to what to do. Ask him to put himself in your position, adding you'd like to place the business with him and pointing out that you realize that his price is fair. Don't try to get him to cut his price. If he feels he should still have the business, offer him the opportunity of making a contribution to your school to offset the price differential. This is much better than a price-chiseling approach, for it appeals to the nobler motive of benefaction.

In some instances, people interested in the school like to give equipment. This, too, can create bad community relationships unless the local supplier knows the circumstances. Take the trouble and time to explain them.

Before you place an order, call in the local supplier and explain that you can fulfill certain of your needs much more advantageously outside your trade area and ask his advice.



Perhaps yours is one of the small private schools that experience the perennial problem of heavy summer maintenance expenses with no student income to pay the bills. If your local painters, carpenters and other contractors know your problem *in advance*, they'll cooperate. Even unions will swing into line as was amazingly demonstrated at Valparaiso in 1948 when 12 unions waived jurisdiction so that our students could erect a most creditable engineering laboratory at a 50 cents an hour wage scale. We on our part went a step further and took considerable pains to place these unions in a most favorable light at a time when their own public relations were suffering. They appreciated it. All this was done with the full impact of the business office in the background, for our business manager had lived with the unions in the past and anticipated living with them in the future. Without his counsel much grief could have resulted.

MAKE USE OF ENVELOPE

No mail should leave the campus without some effort to place the institution in a favorable light when it is delivered to the addressee. Every letter placed in the mail passes through dozens of hands before being delivered. Scant attention is paid to the envelope despite the fact that postal regulations permit the left one-third of the face of the envelope to be used by the sender. Also, the entire back of the envelope is available for the use of the sender. Why waste the entire space? And, if you use a postage meter, don't neglect the possibility of a public relations "slogan imprint."

True, the secretary opens the mail and throws the envelope away. But even she may be of help to your institution. We have a secretary friend in Chicago who persuades her employer each year to send us a check, and her first acquaintance with us was the slogan of the meter. If you doubt that there are many secretaries such as she, give attention to your stationery and letterheads. Why do they have to be so dry and conventional, cold and unappealing? Only banks can afford this, and even they are changing. Instead of the accepted practice, why not employ a good artist who understands color dynamics? Let your letterhead tell a part of the story of your institution. Dare to use stationery other than white! If yours is a private institution that is trying to interest industry in its welfare, here is a golden opportunity. If yours is a state school, industry should know how it is serving.

I would even go so far as to dress up statements and checks. With statements you can make the obligation a bit less irritating or objectionable by subtly selling the debtor on your philosophy; on the checks you can make the experience of the recipient even pleasanter by pointing up your ideals.

The purpose here is an attempt to stimulate your thinking rather than to provide a blueprint of procedures. If the attempt has not succeeded, consult your campus public relations office. These specialists have the job of presenting your school in the best possible light. They won't know the intricacies of your position, but they will know your public. They will be in a position to help you if given the opportunity.

The business officer's responsibility is primarily that of service. He serves his institution by serving others. He occupies a unique position in the public relations aspects of his school. There is no mystery to public relations. A good public relations program is nothing more or less than the application of the Golden Rule. The trouble is we misplace the emphasis. Instead of *doing* first, as the Rule has it, we wait for others to do for us first. Too often we are "done for" when this is a policy. Our Lord also said: "Give and ye shall receive." This is most true of a public relations program for the business office. Initiate a program for your own office and the rest of the campus will fall into line. Even if no one gives you a commendatory pat above the belt, you'll have the satisfaction of living more happily with yourself.

Making Student Loans

W. ROBERT BOKELMAN

Business Manager-Bursar
University of Kansas City, Kansas City, Mo.

"I HAVE HAD SEVERAL REQUESTS recently for small loans for a short period of time to help some students get over a financial hump," reported the dean of students about a year ago. "I think that it would be appropriate for this committee to consider the wisdom of setting up from the regular loan funds an amount that could be lent without too much red tape. The amount would not need to be large. In most cases a maximum amount of \$25 would help these emergency cases."

From this suggestion made to our student aid committee, we developed a streamlined plan for short-term emergency loans. The urgency of the situation caused us to act quickly. However, we wondered what other schools were doing under similar situations. Were emergency loans common in other schools? What rate of interest or what service charge was made? Was security required?

A subcommittee was appointed to make a study to find what other schools were doing as far as emergency loans were concerned. Information also was to be gathered to study the entire program of student loans. How did we compare on our regular loan practices as well as our emergency loan practices? This was especially pertinent at the time since we expected, in the near future, to have \$100,000 added to our loan fund from the estate of a benefactress.

Survey sheets, containing lists of items that seemed pertinent for examination and comparison with other institutions, were sent to 207 institutions of higher learning. Responses were received from 130 of them. Incomplete returns and late responses reduced the usable number to 100. Replies were received from schools in 15 states. The states from which

usable responses were received and the types of schools from which these responses were received follow:

	State- Church City Private			Total
Illinois.....	7	3	7	17
Kansas.....	6	9	1	16
Indiana.....	9	3	0	12
Iowa.....	7	3	1	11
Missouri.....	6	4	1	11
Nebraska.....	7	4	0	11
Oklahoma.....	3	5	2	10
Ohio.....	0	4	0	4
Minnesota.....	1	0	1	2
One each from six states.....	1	3	2	6
TOTAL.....	47	38	15	100

It was felt that the policies of a school in making student loans would depend to a large extent upon the amount of money available for each student enrolled. Enrollment figures reported in the Office of Education's "Education Directory, Part 3," were used to determine the average amount available for each student for each school.

Thirty schools had less than \$10 per student available in the loan fund, 42 had from \$10 to \$30, while 28 had

more than \$30 per student available in loan funds.

It was found that the present demand for loans is greater than it had been in recent years for 64 per cent of the schools, ranging from 50 per cent for the schools having the lowest per capita amount in their loan funds to 71 per cent for the schools having the highest per capita loan amount. This leads to the assumption that where the most money is available, the demand is greatest.

We had recently made a loan of \$1000 to a student in one of our professional schools. How did this compare with the maximum amount that other schools would lend to a student in one year? The answer can be found in Table 1.

As one might expect, the schools having the greatest amount of money available in their loan funds were the ones that were making the largest loans.

We also wanted to know how much the schools would lend to the same student over a period of years. How much would they permit one student

Table 1—Maximum Sum That May Be Borrowed by a Student in Any One Academic Year

	—\$10	\$10-30	+\$30	Total
Total responses.....	30	42	28	100
Maximum sum.....	\$600	\$1000	\$1400	
Median sum.....	150	300	350	
Percentages of total responses by groups				
+\$1000.....	0	0	4	1
\$750-1000.....	0	5	0	2
\$500-749.....	10	12	14	12
\$250-499.....	13	38	50	34
—\$250.....	60	21	14	31
Amount not set.....	13	12	11	12
Amount of tuition.....	4	12	7	8
	100	100	100	100

Table 2—Maximum Sum That May Be Borrowed by One Student Over a Number of Years

	—\$10	\$10-30	+\$30	Total
Total responses.....	30	42	28	100
Maximum sum.....	\$1200	\$2500	\$2000	
Median sum.....	300	500	750	
Percentages of total responses by groups				
+\$1000.....	7	10	14	10
\$750-1000.....	3	5	32	12
\$500-749.....	3	35	21	22
\$250-499.....	17	12	11	13
—\$250.....	37	12	4	17
Amount not set.....	30	21	11	21
Amount of tuition.....	3	5	7	5
	100	100	100	100

to become indebted? Table 2 supplies this answer.

How businesslike or banklike are schools in making loans? Sixty-four per cent of the schools required nothing more than personal endorsement in obtaining a loan. Where security other than personal endorsement was demanded, the commonest types of security required were assignment of insurance and assignment of personal property through the use of a collateral mortgage.

Restriction of loans to a particular grade level or restriction from lower classmen was not a consistent practice. About half of the schools made no class distinction in making loans; the other half ranged from requirements of one semester of residence to restriction of loans to seniors only.

Three of four schools indicated that the academic average was a determining factor in approving a loan request.

There was a lack of consistency in school practices as far as the time when repayment was to begin. Table

Table 3—Time When Repayment of Loans Begins

	—\$10	\$10-30	+\$30	Total
Total responses...	30	42	28	100
Percentages of total responses by groups				
From at once to end of current semester	27	9	0	12
Six months to one year from loan date.....	10	20	4	12
From withdrawal or graduation to two years after withdrawal or graduation....	40	45	57	47
Varies or not set..	23	26	39	29
	100	100	100	100

3 illustrates responses to this question.

Ninety-four per cent of the schools indicated that they charged interest on student loans. Most of the schools not charging interest were in the group of schools having less than \$10 per student available in loan funds. Some 60 per cent of the schools charged interest from the date of the loan. An additional 20 per cent charged interest from the date of graduation or withdrawal. Various plans were found in the remaining 20 per cent of the schools.

Interest rates charged on loans ranged from no interest to due date to an interest rate of 7 per cent. The range of interest charges is shown in Table 4.

Table 4—Interest Rates Charged on Regular Student Loans

	—\$10	\$10-30	+\$30	Total
Total responses...	30	42	28	100
Percentages of total responses by groups:				
6-7%.....	32	27	18	27
4-5%.....	24	29	43	32
2-3%.....	20	7	11	12
2-6% to due date, 3-8% after due date.....	16	32	14	21
0% to due date, 2-6% after due date.....	8	2	0	3
Miscellaneous....	0	3	14	5
	100	100	100	100

One-fourth of the schools had attached a penalty or increased rate to become effective if the loan had not been paid by the due date.

Only 5 per cent of the schools indicated that they used the services of a collection agent, and such use was

made only after the school itself had been unsuccessful in making collection.

There was almost an even distribution on the question of requiring students to repay the loan in full before transferring to another school. Forty-nine per cent of the schools required repayment before students were permitted to transfer; 47 per cent reported that the student did not need to repay before transferring, while 4 per cent of the schools did not answer this question.

Loans for subsistence and living costs as well as for tuition and fee charges were made by 84 per cent of the schools that replied.

Eighty-seven per cent of the schools had separate provisions for short-term emergency loans. The median amount loaned for emergency purposes was \$50 in all three categories, as indicated in Table 5.

Table 5—Maximum Amount That Might Be Borrowed for Emergency Purposes

	—\$10	\$10-30	+\$30	Total
Total responses...	28	35	24	87
Maximum sum....	\$500	\$300	\$400	
Median sum.....	50	50	50	
Percentages of total responses by groups:				
\$300-500.....	7	3	8	6
\$100-299.....	25	26	25	25
\$50-99.....	21	34	13	24
—\$50.....	18	20	29	22
Misc. or not set...	29	17	25	21
	100	100	100	100

Fifty-four per cent of the 87 schools that indicated they had provisions for emergency loans charged either a set rate of interest or made a service charge for the use of the money. The rates of interest followed the pattern of the rates for the regular student loans, ranging to a maximum of 7 per cent.

The term for emergency loans varied widely, from a minimum of less than one month to a maximum of 12 months. Twenty-eight per cent permitted a maximum term of one month or less. Fourteen per cent permitted a maximum term of from six months to 12 months. The remainder of the schools set terms for emergency loans between one month and six months.

Responses were received from schools having loan funds whose principal sums ranged from \$500 to

Table 6—Total Amount of Loan Funds

	—\$10	\$10-30	+\$30	Total
Total responses.....	30	42	28	100
Maximum sum.....	\$74,100	\$556,319	\$1,000,000	
Median sum.....	5,750	16,500	59,647	
Minimum sum.....	500	3,000	12,000	
Percentages of total responses by groups				
\$200,000+.....	0	12	18	10
\$100,000-199,999.....	0	14	18	11
\$75,000-99,999.....	0	0	10	3
\$50,000-74,999.....	3	5	4	4
\$25,000-49,999.....	10	5	25	12
\$10,000-24,999.....	23	36	25	29
\$5,000-9,999.....	24	19	0	15
\$2,000-4,999.....	20	9	0	10
—\$2,000.....	20	0	0	6
	100	100	100	100

\$1,000,000. These amounts are shown in Table 6.

The median percentage of available funds lent to students at the time the information was supplied was approximately 30 per cent. At the upper extreme was 10 per cent of the schools that had 75 per cent or more of their funds borrowed; at the lower extreme was 11 per cent of the schools that had less than 10 per cent of their funds borrowed.

Sixty-four per cent of the schools had, within the past 10 years, written off uncollected loans made prior to 1942. The amounts varied from \$22 to \$20,000. The group medians were \$350 (—\$10), \$785 (\$10-30), and \$2850 (+\$30). Thirty per cent of these 64 schools did not know what the amount was that had been written off. This might reflect upon the method of keeping such records or upon the possibility of personnel turnover in the offices.

Thirty-four per cent of the institutions reported that uncollected loans made since 1942 had been written off. These amounts varied from \$25 to \$3000. The group medians were \$200 (—\$10), \$368 (\$10-30), and \$850 (+\$30). Twenty-three per cent of these 34 schools did not know what amount had been written off.

A range from none of present loans past due to 75 per cent of loans past due was revealed. The median percentages were 5, 8, and 12 in the three respective groups.

The schools were optimistic about collecting outstanding loans made during the previous 10 years. The medians of the estimated uncollectible loans varied from 1 to 5 per cent.

Table 7 illustrates the magnitude of financial assistance awarded to students in the schools that reported. Since a student might receive financial assistance in more than one of these categories—scholarships, student loans, and work grants—it is impossible to determine the cumulative effect of the three types of aid.

Table 7—Percentages of Full-Time Student Body Receiving Financial Assistance

	—\$10	\$10-30	+\$30
SCHOLARSHIPS			
Maximum.....	42	55	41
Median.....	9	13	19
LOANS			
Maximum.....	30	30	60
Median.....	4	5	6
WORK GRANTS			
Maximum.....	50	100	44
Median.....	12	25	20

Twenty-six per cent of the schools reported that they grant loans to part-time students.

In 80 per cent of the schools, the business officer was included in the committee that reviews student loan requests. In 64 of the 100 schools the business officer had the authority to refuse to make a loan when there appeared to be insufficient security.

Answers to the question, "In your judgment, why do some students fail to repay their loans?" fell into six general headings. These were:

1. Attitude and character of the particular student (39 per cent of the responses)
2. Family and personal responsibilities (23 per cent of the responses)
3. Less revenue from employment

than anticipated (13 per cent of the responses)

4. Shortcomings of school's loan committee (10 per cent of the responses)

5. Not a problem in our school (8 per cent of the responses)

6. School's collection policies (7 per cent of the responses)

Some of the comments classed under attitude and character of the particular student are: lack sense of responsibility; dead beat; indifference; poor risk; considered it a gift; lack moral responsibility; ill feeling toward university.

These comments were grouped under the heading of family and personal responsibilities: marriage; illness; death in family; obligations to family; military service.

Under the classification of less revenue from employment than anticipated appeared these remarks: pressure of current expenses; financial reverses; unemployment; adverse economic conditions.

These remarks were grouped under the heading of shortcomings of school's loan committee: loans too big; not strict enough in conditions; loans made for too long a period; too much sentiment on part of committee; lack of care in making loan; lack of proper instructions.

Five classes of responses were used to group the replies to the question, "In your judgment, why do some students hesitate to borrow from student loan funds?" These were:

1. Personal (63 per cent of the responses)
2. No hesitation noticed (14 per cent of the responses)
3. University policies (11 per cent of the responses)
4. University publicity (8 per cent of the responses)
5. Economic conditions (4 per cent of the responses)

Comments under the personal heading were: do not want to become indebted; prefer gift to loan; pride; do not like to ask co-signers; desire to keep personal problems from college authorities; prefer to earn rather than to borrow.

These remarks appeared under the heading of university policies: do not encourage use of loan fund; too much red tape.

Under the heading of university publicity appeared these: students not informed of availability of funds; poor counseling. Comments under the eco-

nomic conditions heading included these: uncertainty of future; the need has not been too great.

The following observations are made from this study:

1. As one would expect, the maximum amounts that will be lent to students varies according to the amount of loan funds available. It may be as low as some portion of the tuition cost and as high as total tuition and subsistence costs for a year. The amount that a student may borrow over a number of years is approximately double the amount that he may borrow in any one year.

2. Two-thirds of the schools require no other security than the personal signature of the maker.

3. About half of the schools will make loans to students without regard to class standing or period of residence.

4. Attention is given to the academic achievement of the student requesting a loan by three-fourths of the schools.

5. There is a wide difference in the length of time allowed the student who has borrowed to begin repayment. One-fourth of the schools require repayment to begin within one year of the date of the loan. Almost 30 per cent of the schools have no set policy as to the time repayment is to begin.

6. Ninety-four per cent of the schools assess an interest charge for the use of student loan funds. Rates of interest charged range as high as 7 per cent on loans repaid during the term of the loan and as high as 8 per cent on loans that are delinquent.

7. Five per cent of the schools use collection agencies, but only after they have failed to make the collection.

8. Eighty-four per cent of the schools will lend for subsistence payments as well as for tuition payments.

9. Provisions for short-term emergency loans have been made by 87 per cent of the schools. The median amount that may be borrowed is \$50. About half of the schools limit the terms of these loans to two months or less. The others range as long as 12 months.

10. When this study was made, the schools had about 30 per cent of their funds in loans.

11. Almost two-thirds of the schools had written off uncollected loans made prior to 1942.

12. Approximately 8 per cent of the student loans outstanding at the time

of this study were delinquent. The schools were optimistic about making collections.

13. In 64 per cent of the schools the business officer of the school may refuse to grant a loan when it appears that the student has insufficient security.

14. Lack of responsibility on the part of the student and pressing family

responsibilities were listed as the most frequent causes for students' failure to repay. Poor business procedures on the part of the student loan committee received 10 per cent of the responses.

15. A reluctance to become indebted was the leading reason revealed for students' lack of interest in borrowing from student loan funds.

Keep Trees Healthy

with regular feeding

WALTER E. WINN Jr.

*Superintendent of Grounds
Phillips Academy, Andover, Mass.*

PHILLIPS ACADEMY, ANDOVER, MASS., has a large campus shaded by some of the finest elm trees in New England. To withstand the threat of the dreaded elm blight carried by the elm tree beetles, the trees are kept clean and free of diseased wood with regular spraying and pruning. I believe a good strong healthy tree will resist disease.

An elm tree on the main campus was given up as being beyond use as a shade tree. We trenched circles around the tree, leaving 3 feet between trenches. The old loam was carted away and a mixture of three parts virgin loam and one part cow manure was put in the trenches and soaked with water. The following year that tree leafed out and it has made a steady recovery since.

The method used is not new by any means, but we had to find a method that would accomplish the same result and one that would take one-half or one-third the time.

We purchased a soil auger to attach to the power take-off in the rear of our Ford tractor. This auger makes a hole 9 inches in diameter and 3 feet deep. It has a tendency to loosen the soil as it drills. Two men can drill 21 holes in 45 minutes. A bucket-loader in front of the tractor transfers the mixture of loam and manure to the truck, doing away with hand labor.

On this job we have five men, two trucks, and the tractor. The first two



A closeup of the soil auger, which makes a hole 9 inches in diameter and 3 feet deep.

men drill the hole after a circle of sod is cut out with a shovel. One man shovels the dirt from the hole into the truck, and the other two men fill the hole with new material, tamp the soil, and replace the sod.

An elm tree that is gradually dying from the top (tests do not reveal what is wrong with it) is now being treated. I believe the tree has too much drainage. We drilled holes with the auger and brought up gravel from around the roots. Twenty-one holes around this tree were filled with the soil mixture. We intend to continue this same operation until we have new soil around all the roots.

Vacation Conferences Can Be Profitable

***and good public relations
for the college as well***

RUPERT A. HAWK
Treasurer
Grinnell College, Grinnell, Iowa



Campus facilities can be used during vacations
for entertaining conferences and conventions.



DURING THE LAST 10 YEARS GRINNELL College, Grinnell, Iowa, has made a practice of using its campus facilities, during vacation time, for entertaining conferences and conventions.

The reasons for such operations are fairly obvious. First, there is a demand from religious, educational and service groups for opportunities to hold conferences of their group members. Second, the operation of such conferences can be profitable and, since no academic faculty is required, it usually is more rewarding financially than operating a summer or vacation school of similar length. Finally, if the conference operation is well handled, it can produce benefits in the public relations field.

The problem that always arises relates to the type of conference. A good working rule is to entertain any group that you would not object to having on your campus while the regular school session is in operation.

MANY TYPES OF CONFERENCES

Conferences vary considerably as to makeup and treatment. There is the conference with, what we call, regular registration. The whole group arrives on the same day and leaves at a fixed date. In that case, registration is simple. When the delegate registers, he pays his fees and gets a conference badge that admits him to all conference sessions and to meals and housing. At the conclusion of the conference the organization can be "billed" for the total charges.

With what we call "irregular registration" many of those who attend come for just a few sessions or days of the conference. Then a ticket procedure must be used and, at each event or service, an inspection or collection of the ticket made.

Some conferences involve only young people and, in that case, recreational facilities must be available. If the group includes many elderly persons, wheel chairs may have to be at hand and stair approaches may have to be "ramped." In the case of family groups a nursery may have to be set up, arrangements for baby feeding may be needed, and the housekeeping department may have to use rubber sheeting.

There are many problems that can arise in the operation of conferences, but the following three ideas seem to be essential for the administration of such events:

1. Early and thorough planning is necessary and it is one of the hardest

things to get done. Most people like to extemporize. We at Grinnell feel that whenever we can get the guest organization to make a printed program the job of planning is half done. With this program at hand, and with the objectives of the conference in mind, we prepare a four-page, legal size contract or memorandum that constitutes a meeting of the minds as to what is necessary. Seven copies of this memorandum are prepared and each department head who has something to do with the conference gets a copy. This forces early planning of each operation and in each department.

2. A conference group or committee is necessary with someone acting as chairman or executive director. There then must be a conference staff or committee to work with this chairman. In our organization the staff consists of the business manager as chairman; the director of foods; the superintendent of buildings and grounds; the director of housekeeping, and the publicity director. Before each conference takes place this group holds a meeting and has a "dry run" or dress rehearsal on the planned operation. At the end of the conference season a postmortem meeting is held at which time the operations are discussed critically.

3. If many conferences are held a conference director or coordinator is necessary. After all, the business manager must get his other work done. This person works intimately, during the conference, with the officers of the guest group so that their needs and wants are satisfied. This coordinator should be a person who is accustomed to working with people and has a thorough knowledge of the facilities and operation of the institution. In the Grinnell operation we usually use the dean of men or one of the athletic coaches.

The three general types of services that need to be furnished are housing, feeding and meeting places. Recreational facilities (swimming, tennis, volleyball, soft ball, golf, riding) are valuable and almost necessary with teen-aged groups. Sometimes transportation and a type of bell-hop service are needed if most visitors are to arrive by rail and if the railway station is at a distance from the campus.

Following are several hints or general rules that we have developed in the past few years.

There needs to be a daily check of the housing facilities so that any shortages or breakage can be reported im-

mediately to the conference coordinator. He, in turn, needs to make a daily report to the business office and to the chairman of the guest group. This must be done daily and not just at the end of the conference.

Athletic and recreational equipment should be issued only to an adult of the guest group and on a written receipt. The same person issuing the equipment should check it back and any shortage or damage should be reported to the business office at once.

Supervise and, if necessary, take over the registration. Usually employees that help at student registration time are much more efficient than any lay, amateur group doing it for the first time. Identification badges must be typed (use a typewriter with extra large type), fees must be collected, rooms must be assigned, meal tickets must be issued (if it is an irregular registration), and switchboard lists must be made. Large sums of money should be checked and banked or put in the night depository.

ANTICIPATE THE NEEDS

Try to anticipate the needs of the conference. No matter how well you have planned the operation and no matter how many questions you have asked, there is always a last minute call for motion picture projectors, portable movie screens, portable blackboards, public address systems, and electric fans.

At Grinnell, we sometimes have as many as three conferences going on simultaneously, and housing, feeding and meeting place charts need to be planned and prepared well in advance. Each conference must have a registration place or headquarters, and it is our experience that this should be as close to the housing and feeding accommodations for that conference as possible. This also will be the place where mail will be distributed.

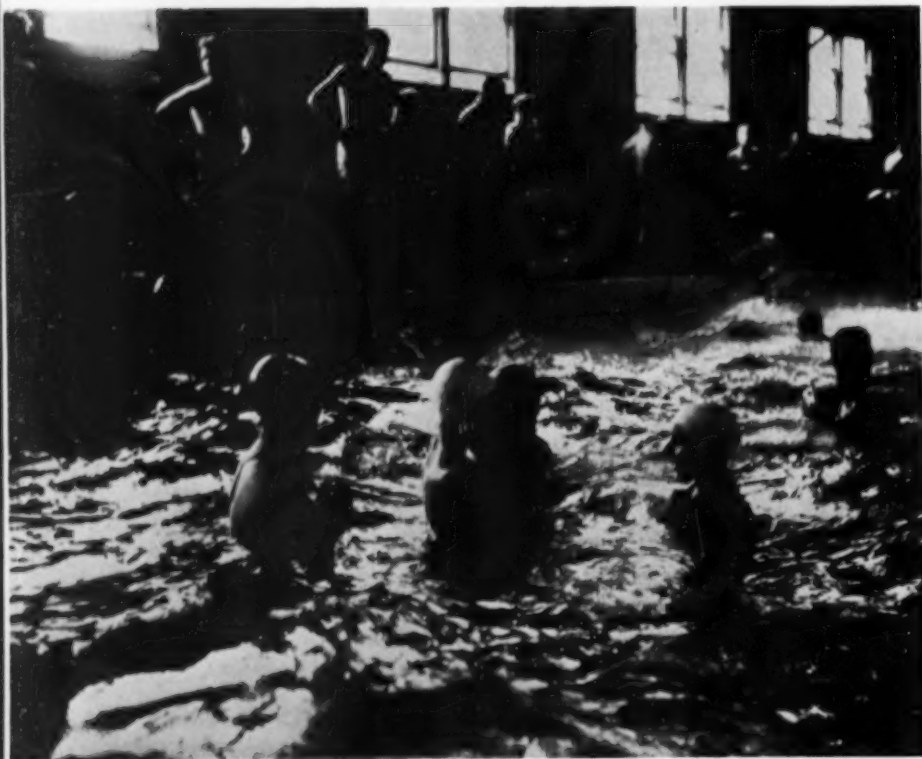
We have a nurse on duty in the infirmary, and at the end of the conference I am always surprised at the variety of services she has rendered.

During a conference, 24 hour telephone service is necessary. The switchboard, by the end of opening day, should have available the names, home addresses, and campus room numbers of all in attendance. Also, each registration center should have a desk telephone connected with the campus telephone exchange.

Provision must be made to house and feed the advance staff of the guest



Above: A good working rule is to entertain any group that you would not object to having on your campus while the regular session is in operation. Below: Recreation facilities, including the swimming pool, should be made available to those conferences where only young people will be in attendance.



group, which usually arrives one or two days early. If the conference is large it might be well to have this guest group meet with your own conference staff. The more you know them as individuals, the more you understand the philosophy and objects of their organization, the more your staff can help them.

If the conference is in the summer take steps to prevent food spoilage. Nothing can ruin a conference more quickly than a few cases of food poisoning. Stay away from mayonnaise and eggs, and use cold drinks sparingly. Hot cooked foods should be served. Avoid the "drive-in" type of foods. All food services should be strictly supervised.

CHARGE FOR OVERTIME

Many guest groups want at least one meeting around a campfire. In our operation we have a buildings and grounds man take charge of this. He gets the fuel, builds the fire, stands by at all times, and at the end of the meeting quenches the fire. We make a charge for whatever overtime is necessary.

Conference groups should be urged to cover their event with health and accident insurance. While the college is insured against its negligence, seldom does the guest group have insurance that covers mishaps and emergency sickness. Last year we added a small surcharge for each conference and took out health and accident insurance on the guest group.

To be profitable, conferences must be sizable as to numbers. Strange as it may seem, it is easier to take care of 2000 than 200. Preliminary plans usually are made a year in advance with the final plans being crystallized about 60 days before the conference.

One thing most organizations like to have is a group picture. It is well for the publicity department to make arrangements with a photographer experienced in taking the pictures of large groups. We keep a small set of portable bleachers handy for use in arranging the group.

Conference operation is hard work, but after a little while helpers get into the spirit of the operation and it gets to be a game. Of course, there are disadvantages in all operations. If most of the vacation period is taken up in conferences, other work will suffer. Campus buildings and dormitories cannot be painted or repaired when guests are using them.



Colleges report on ownership of

Buses and Other Passenger Cars

GRANVILLE K. THOMPSON

Specialist for College Business Management
Office of Education, Federal Security Agency

IN THE SPRING OF 1952 THE DEFENSE Transport Administration asked the U.S. Office of Education for data regarding the number of buses and other passenger vehicles owned and/or leased by colleges and universities. Information was needed by D.T.A. in connection with the performance of its claimant agency functions under the Controlled Materials Plan of the National Production Authority. Estimates of the quantities of steel, copper and aluminum required for the manufacture of buses and motor vehicles were



Some schools, in use nights as well as days, have bus loading platforms that have been equipped with night lighting.

Table 1—Buses, Owned and Leased, and Station Wagons and Passenger Cars Owned by Higher Educational Institutions, 1952, Continental United States, by Control and Type of Institutions

Continental United States	Control			Type						
	Total	Pub.	Pri.	Teachers Colleges	Universities	Ind. Tech. Schools	Theol. Schools	Other Ind. Prof. Schools	Liberal Arts Colleges	Jr. Colleges
1	2	3	4	5	6	7	8	9	10	11
Institutions:										
Total.....	1,863	650	1,213	129	52	125	152	685	201	519
No. responding.....	1,305	456	849	93	38	90	95	503	145	341
Response rate.....	70.0	70.2	70.0	72.1	73.1	72.0	62.5	73.4	72.1	65.1
No. reporting buses owned or leased.....	427	212	215	46	11	11	6	156	69	128
Buses owned and buses leased:										
Total buses owned and leased.....	1,301	828	473	172	32	13	6	321	141	616
Total seating capacity.....	49,793	34,700	15,093	5,543	920	412	174	10,435	4,213	28,096
Miles traveled, 1952 (in thousands).....	10,785	6,879	3,906	1,123	102	74	61	3,346	1,482	4,597
Buses owned:										
No. institutions.....	373	191	182	43	10	8	6	132	62	112
No. buses owned.....	990	722	268	117	18	10	6	209	116	514
Seating capacity.....	38,982	30,886	8,096	3,358	480	311	174	6,440	3,738	24,481
Miles traveled, 1952 (in thousands).....	9,798	6,497	3,301	927	100	68	61	2,937	1,409	4,296
Buses leased:										
No. institutions.....	74	33	41	8	1	3	.....	28	12	22
No. buses leased.....	311	106	205	55	14	3	.....	112	25	102
Seating capacity.....	10,811	3,814	6,997	2,185	440	101	.....	3,995	475	3,615
Miles traveled, 1952 (in thousands).....	987	382	605	196	2	6	.....	409	73	301
Station wagons and passenger cars owned:										
No. institutions.....	563	214	349	76	24	23	8	265	74	93
No. vehicles.....	3,056	1,809	1,247	1,491	222	65	20	809	214	235
Seating capacity.....	17,272	10,219	7,053	8,170	990	414	130	4,866	1,288	1,414
Miles traveled, 1952 (in thousands).....	39,776	22,642	17,134	18,787	2,402	808	487	10,676	3,244	3,372

Source: Division of Higher Education, Office of Education, Department of Health, Education and Welfare.

Table 2—Buses, Owned and Leased, and Station Wagons and Passenger Cars Owned by Higher Educational Institutions, 1952, Continental United States and Outlying Parts, by States

State	Institutions			Buses, Owned and Leased				Station Wagons and Passenger Cars Owned			
	Total	No. Resp.	Response Rate	No. Reporting Buses Owned or Leased	Total Buses Owned and Leased	Total Seating Capacity	Miles Traveled, 1952, in Thousands	No. Colleges Reporting Vehicles	No. Vehicles Owned	Total Seating	Mileage in Thousands
1	2	3	4	5	6	7	8	9	10	11	12
Cont. U. S.	1,863	1,305	70.0	427	1,301	49,793	10,785	563	3,056	17,272	39,776
Ala.	26	22	84.6	8	14	417	198	11	76	289	755
Ariz.	6	6	100.0	5	13	450	123	5	41	197	740
Ark.	23	16	69.6	14	21	646	129	12	44	258	825
Calif.	127	96	75.6	50	387	20,290	3,005	49	305	1,821	3,605
Calo.	20	14	70.0	4	11	239	87	8	102	576	798
Conn.	29	21	72.4	8	10	308	62	10	38	194	322
Del.	5	4	80.0	2	2	54	12	1	1	9	20
Fla.	18	13	72.2	6	24	970	638	6	35	190	493
Ga.	55	37	67.3	14	30	959	271	11	32	201	321
Idaho.	7	6	85.7	3	3	69	6	3	10	54	222
Ill.	104	69	66.3	14	44	1,456	346	22	97	584	1,660
Ind.	39	26	66.7	4	19	678	82	14	145	786	864
Iowa.	48	34	70.8	15	44	1,567	253	13	184	1,013	2,667
Kan.	45	26	58.8	9	14	401	140	7	64	358	965
Ky.	41	24	58.5	6	9	266	104	9	15	92	217
La.	20	8	40.0	5	9	240	91	6	68	373	360
Maine.	13	8	61.5	1	1	12	4	1	16	65	155
Md.	32	18	56.3	4	7	245	99	9	23	202	223
Mass.	76	50	65.8	5	15	584	38	16	142	756	1,135
Mich.	48	33	68.8	10	40	1,486	377	11	40	202	609
Minn.	43	28	65.1	10	19	562	168	10	74	432	878
Miss.	38	28	73.7	19	53	2,037	403	12	26	174	346
Mo.	55	44	80.0	11	31	1,224	359	16	53	296	1,082
Mont.	11	6	54.5	3	4	102	16	4	44	255	536
Neb.	24	20	82.5	5	15	565	223	11	117	625	2,439
Nev.	1	.....	00.0	.....	.....	.....	.....	.....	.....	.....	.....
N. H.	9	6	66.7	1	3	70	2	3	19	102	395
N. J.	37	30	81.1	5	8	277	47	12	121	598	2,270
N. M.	9	6	66.7	5	14	330	77	5	16	89	242
N. Y.	139	98	70.5	22	52	1,664	334	39	114	747	988
N. C.	55	36	65.5	13	29	907	119	14	28	167	316
N. D.	13	9	69.2	4	4	88	28	5	9	43	170
Ohio.	70	59	84.3	18	58	1,852	1,041	27	128	774	1,269
Okl.	33	21	63.6	10	10	338	82	9	23	154	438
Ore.	21	13	61.9	4	4	127	17	6	8	54	107
Pa.	110	79	71.8	17	70	1,762	190	33	69	452	755
R. I.	11	6	54.5	.....	.....	.....	.....	3	8	53	190
S. C.	32	17	53.1	6	11	331	81	7	73	438	232
S. D.	15	11	73.3	3	3	81	56	5	27	145	300
Tenn.	48	28	58.3	4	6	214	55	16	89	474	1,920
Tex.	98	70	71.4	41	101	3,487	999	37	187	1,058	2,313
Utah.	9	5	55.6	2	3	85	16	3	4	29	30
Vt.	13	8	61.5	2	2	46	15	3	3	20	25
Va.	42	31	73.8	6	15	242	70	18	103	494	1,747
Wash.	28	23	82.1	13	25	703	160	10	83	502	1,991
W. Va.	22	18	81.8	7	16	438	55	9	50	289	774
W.	66	50	75.8	4	20	685	34	12	47	283	321
Wyo.	2	2	100.0	1	1	33	2	1	34	206	500
D. C.	27	22	81.5	4	7	205	71	9	21	99	246
Outlying.	7	6	85.7	.....	.....	.....	.....	3	20	103	175
Alaska.	1	1	100.0	.....	.....	.....	.....	1	4	22	10
T. H.	1	1	100.0	.....	.....	.....	.....	1	14	69	140
Panama.	1	1	100.0	.....	.....	.....	.....	.....	.....	.....	.....
Puerto Rico.	4	3	75.0	.....	.....	.....	.....	1	2	12	25
Aggregate U. S.	1,870	1,311	70.2	427	1,301	49,793	10,785	566	3,076	17,375	39,951

Source: Division of Higher Education, Office of Education, Department of Health, Education and Welfare.

needed. Both the D.T.A. and the Office of Education also were interested in obtaining operating statistics on the seating capacity of and the miles traveled per year by the vehicles in question.

Data of the type required were not available in this Office, nor did our research uncover any previous surveys. Accordingly, a postal card questionnaire was sent to the chief business officer at each of the 1870 colleges and universities that was on the mailing list of the Office of Education as of May 1, 1952. Usable returns were furnished by 70.2 per cent, or 1311, of the institutions. Summary tabulations of the data appear in Tables 1 and 2.

CHARTER TRIPS EXCLUDED

Table 1 summarizes the reports from the 1305 responding institutions. Of the 427 institutions owning or leasing buses, 353 reported owning buses only; 54, leasing buses only; and 20, both owning and leasing buses during 1952. Respondents were instructed not to include charter bus trips in their report. In a few instances it was obvious from the responses that charter trips were being reported as "buses leased" and, in these cases, the responses were eliminated in editing the returns.

Table 1 presents an analysis of the total passenger vehicles owned or leased by institutions of higher education in the Continental United States, by control and type of institution.

Table 2 provides an analysis of the totals shown in Table 1, Column 2, distributed by states. Also shown at the bottom of Table 2 is a tabulation of the returns from six institutions outside the Continental United States, information that was not included in Table 1. Because these institutions reported no buses owned or leased, only the data for passenger cars and station wagons are affected.

Altogether, 1301 buses were either owned or leased, an average of slightly more than three per reporting institution. These vehicles had a total seating capacity of 49,793, or an average of 38.3 seats per bus, and a total estimated odometer mileage of 10,785,000, or an average of 8290 miles per year per bus.

It is interesting to note that the 50 California institutions owning or leasing 387 buses (29.7 per cent of all the buses reported for the entire country) account for more than 40 per

cent of the total seating capacity and nearly a third of the estimated mileage. These data are explained by a more detailed analysis, not published in Table 1 or 2, which shows that 28 California junior colleges owned buses and four California junior colleges leased buses which, respectively, affected the totals as follows:

California Junior Colleges

	No. of Buses	Seating	Mileage in Thousands
Buses Owned	314	17,357	2,671
Buses Leased	22	1,236	85

The effect of these reports from California junior colleges, largely publicly controlled, is also noted in the division of buses between publicly and privately controlled institutions (Columns 3 and 4, Table 1).

Table 2 also shows by states and outlying parts data on station wagons and passenger cars. Of the 1311 respondents, 566 institutions reported owning station wagons and/or pas-

senger cars. An average of slightly more than 5.3 vehicles, or a total of 3076, was reported. The total seating capacity was 17,375, or an average of 5.6 seats per vehicle, and the total estimated odometer mileage was 39,776,000, or an average of 12,931 miles per year per vehicle. No such concentration of ownership in a single state was evident for these smaller vehicles as was evident in the case of buses.

The returns showed that 123 buses were purchased or scheduled to be purchased during the calendar year 1952 by the reporting institutions as a group.

Numerous tabulations were made that are not published here. These are available upon request to the Office of Education, Washington, D.C. In general, all the information shown in Tables 1 and 2 has been cross-tabulated by states and outlying parts, and, within those political subdivisions, by race and sex of students, as well as by control and type of institution.

FOOD SERVICE INSTITUTE

More than 40 per cent of the enrollment capacity of the 1954 Food Service Institute has been reached, even though the dates of the institute are still three months away. Registrations are limited to 125 delegates, and are being accepted on a first-come-first-served basis. No single institution may register more than two representatives. The Food Service Institute, sponsored by College and University Business in cooperation with Northwestern University and the University of Chicago, will be held on July 12 to 14 at the Knickerbocker Hotel, Chicago.

Since last month's announcement, the following persons have accepted invitations to appear as speakers on the Food Service Institute program: Lenore M. Sullivan, professor of institution management, Iowa State College, Ames, on "Special Catering Makes Friends and Profits"; Clinton T. Johnson, director of university services at the University of Minnesota, on "Should a Purchasing Agent Buy Foodstuffs?"; Donald E. Dickason, director of nonacademic personnel at the University of Illinois, and Joseph P. Nye, director of residence halls at Columbia University, on "Working With Union Labor"; J. N. McKellin, director of food service at Wheaton College, Wheaton, Ill., on "What's New in Equipment," and Mrs. Ruth N. Donnelly, housing supervisor at the Berkeley campus of the University of California, on "Gracious Living."

Tuition fee checks of \$17.50 for each delegate should be made payable to "Food Service Institute" and mailed to College and University Business, 919 North Michigan Avenue, Chicago 11, Ill.

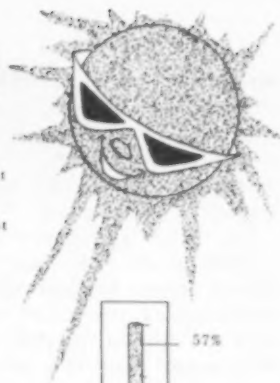
Telling Your Story Through Annual Reports

GEORGE BAUGHMAN

*Business Manager
University of Florida, Gainesville*

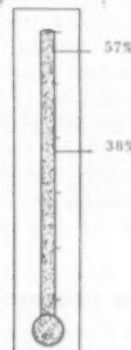
SUMMER ENROLLMENT

Ratio of Summer
Session Enrollment
to the Regular
Session Enrollment



UNIVERSITY OF FLORIDA

AVERAGE OF 52
LAND GRANT INSTITUTIONS



ANNUAL REPORTS HAVE BEEN DEFINED in many ways, but the description that offers the most potential is one in which the annual report is referred to as a moving picture, a moving picture edited to show the finest scenes yet complete enough to tell the whole story.

During the past decade the trend in financial reporting on the part of our large corporations has been interesting to observe. The style and format of these publications are aimed at one objective—appeal to the casual reader. This primary objective has been carried out through the use of attractive cover design, photographs, charts, diagrams, effective color, and many other devices.

In combination with attractiveness in arrangement and eye appeal the typical report presents the basic financial data of the corporation in extremely condensed form. There is also a tendency to present these data in terminology easily understood by the lay-

man, who may not have an understanding of the more technical financial exhibits.

In designing and assembling an annual report for an educational institution the groups to whom the report is addressed must be carefully considered. In some cases the interested parties will be restricted to the trustees or governing boards; in other cases to the alumni, donors or prospective donors, and in the case of state or municipally operated institutions to state and city officials, members of the legislature or city commissioners who provide appropriations, and the citizens of the state who provide the revenue to finance the institution's operation. Recently, there has developed considerable financial support of education and research by large corporations throughout the nation.

The type of information to be presented and, equally important, the method of presentation should be selected with the distribution and use

of the report in mind. Through development and evolution the typical financial report of an institution usually includes (1) title page; (2) list of the officers of the governing board and of the institution; (3) table of contents; (4) letter of transmittal; (5) auditor's certificate; (6) financial statements and exhibits; (7) commentary.

Of course, the real meat of the report consists of the financial exhibits and the comments relative to financial status, amounts expended, income realized, and material accomplishments of the year. To present these data in readable, interesting fashion year after year is a challenge to any business manager.

Some institutions have solved the problem of reader reaction by publishing two different reports each year. One report contains a condensed version of the detailed financial data included in the more technical report, which together with charts, graphs,

STUDENT TEACHER LOAD

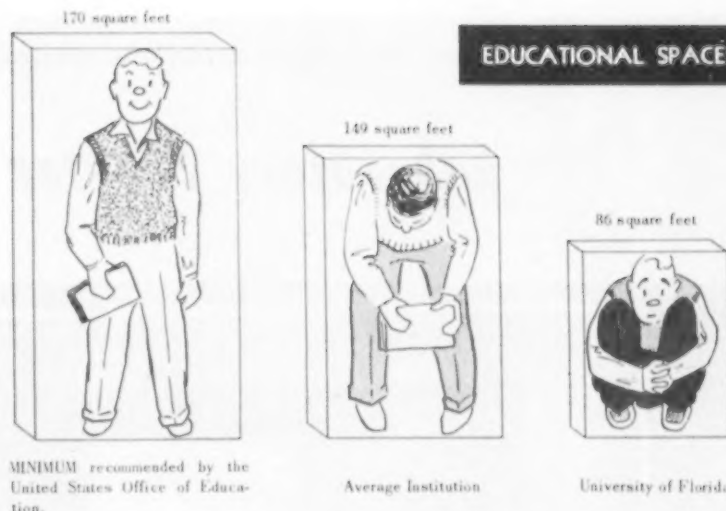
The University of Florida has a 32% heavier load of students than the



illustrations and tables gives the reader in concise form a comprehensive understanding of the operation and accomplishments of the institution. The use of charts and graphs are of material benefit to the reader in digesting both the condensed versions and the complete annual reports.

At the University of Florida we have taken, perhaps, a middle of the road approach to this problem. Basically, we feel that the purpose to be served by the annual report is to transmit information to the citizens of Florida on the progress of their university. Its financial status and the amounts expended for its major functions are perhaps better understood if the narrative and accompanying illustrations tell the story of the progress made during the year and indicate the objectives yet to be attained. We take the position of the management of a commercial corporation in reporting to its stockholders, as we feel that this type of information is of vital concern to the people who actually represent the ownership of this institution.

The process of developing and producing an interesting annual report each year is not an easy one. There are times when new ideas for the presentation of the material fail to materialize. We have found that the best approach is to select a central theme to be followed each year. With the many activities involved on today's campus, interesting material is not too difficult to find once this decision has been made. The theme or feature device may be in the research or the graduate program in agriculture or the medical school; it may have to do with graduates and their place in the life and economy of the state and the nation. The theme can then be developed through the use of graphic material, illustrations and narrative either to the point of highlighting the entire report or merely as a thread of interest to hold it all together.



There are many other problems to resolve in arriving at the final product. If too many graphic displays are used, all of them will not be studied. The displays must have eye appeal, must avoid the "advertising" approach, and must maintain the dignity of the publication. However, a skilled artist can work a little lightness into some of the displays without detracting from the real purpose of the report. Often the matter of cost of developing and printing the report is a factor in determining the format, paper, use of colors, and displays.

The selection of the financial statements to be included in the report is of real importance. Here again, there is the question of how detailed the presentation should be, and the readers to whom the report is addressed should be the deciding factor. We have seen annual reports that contained more than a hundred pages of financial exhibits and schedules. These details are of interest to the institution's immediate management and possibly to its governing board. We seriously doubt that they will be read or assimilated by anyone outside of

this group, unless he happens to be a reader with a purely technical interest.

One of the big accomplishments yet to be achieved in higher institutional reports is the standardization of accounting, terminology and reporting. Recognizing that there are vast differences among institutions, their methods, curriculums, policies, plants and faculties, there still are many factors standard or common to each. In order that interested citizens, legislators, donors, boards of trustees, and college administrative officers can have information about relative costs of providing various programs of study in higher education, of plant maintenance, and of operation and proportionment of costs between teaching and research, attempts should be made to develop technics of cost determination and cost allocation that can be applied on a uniform, nationwide basis.

It was recognized at a recent work conference of college and university business officials held under the auspices of the U.S. Office of Education that industrial and commercial concerns already have gone far in the field of cost accounting but the end product of those organizations is more easily defended than is that of higher education. Moreover, there arises the necessity for a qualitative evaluation of higher education's end product, as well as a fairly complex quantitative measurement. In telling the story of qualitative accomplishments the annual report can be used most dynamically.

Communication has become a cornerstone in this modern, complex life. The annual report can be an effective means of bringing to the public the institution's story.

average of the 52 Land Grant Institutions



From four remodeled classrooms came this

Laboratory Theater



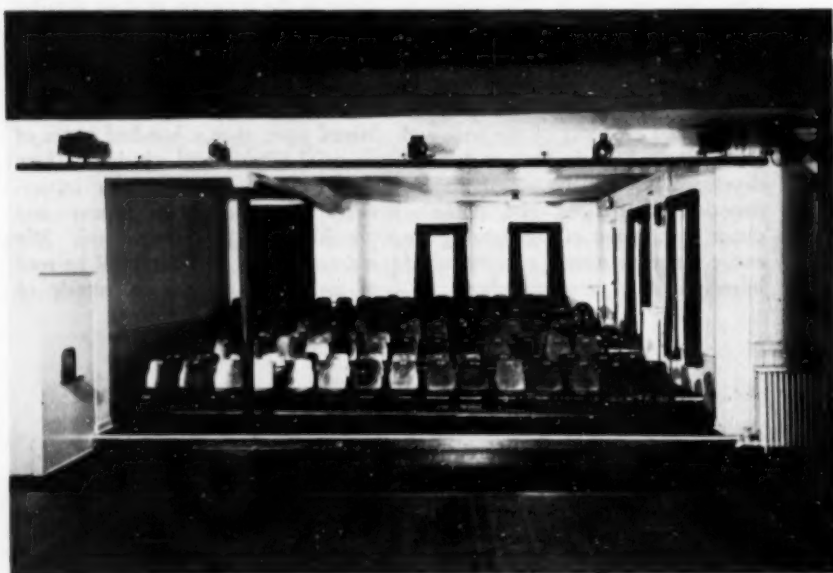
Need: A laboratory theater to continue a 65 year record of fine production at this woman's college and to encourage a young but flourishing dramatic literature program.

Funds: The sum of \$10,000 pledged by the Rockford College alumnae to be raised by them and the campus body.

Space: Five science rooms, in Adams Hall, a substantial brick building erected in 1891.

Materials: Some lights, scenery, old curtains, properties and temporary staging formerly used in the college gymnasium.

The whole area was carefully measured before the plans for the studio theater unit were laid before the administration, trustees and alumnae. The space housed two classrooms, a men's washroom with wooden lockers, a physics storage room with glass fronted cupboards, two offices, a physics laboratory and a chemistry and a physics lecture room, each complete



The studio theater seats 150. Six beam spots, mounted over the girder beam, light the apron and downstage area. Picture at top shows depth of stage, 19 feet to the cycloramic curtain.

ELIZABETH BUCKMASTER

*Formerly Assistant Professor of English
Rockford College, Rockford, Ill.*

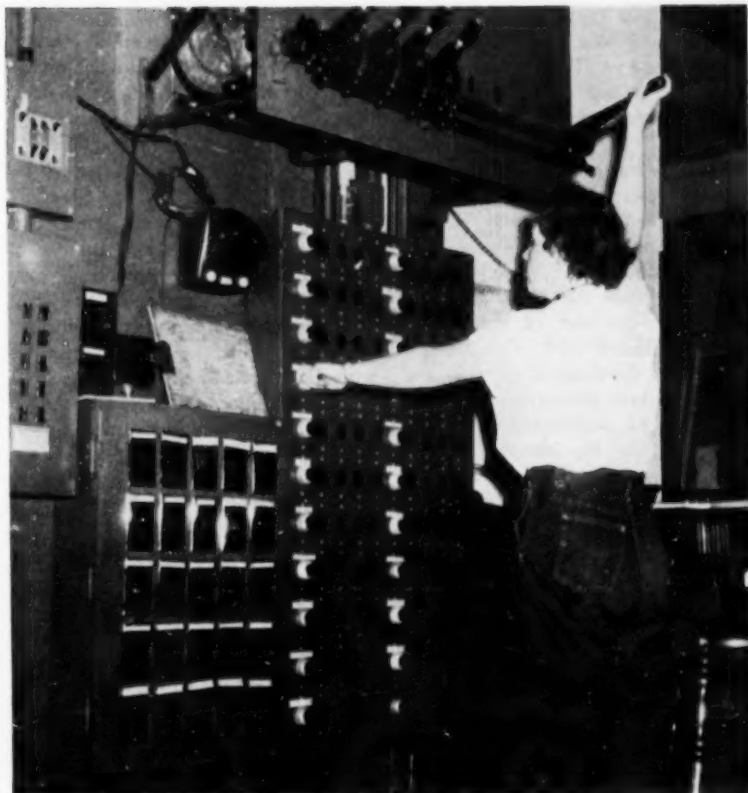
with demonstration bench and tiered auditorium.

The maximum stage width had to be determined by the largest room, which was 28 feet. Room height was 12 feet 2 inches. The interior walls were 15 inch brick and, since two floors exist above the theater area, it was necessary to leave as many walls as possible on the first floor, and to avoid expense by using as few supporting girders as possible.

Because there was plumbing in the washroom as well as in the physics and chemistry lecture rooms, it was decided to make a small washroom with utility sink and toilet next to the men's washroom in the classroom that was to become a combined dressing, costume and rehearsal room. The plumbing was left intact in the physics lecture room, but the length of the bench was cut to make it more practical as a paint and carpenter's bench, and drawers were partitioned as receptacles for small hardware.

The first floor plywood and glass office walls were transported to the second floor, to the old chemistry lecture room above the dressing room, and were used to partition off a small office that could double as an auxiliary dressing room. The office was later connected to the intercommunication system. This second lecture room, of the same proportions as the dressing room below it, serves also as a partitioned property and sewing room. A narrow passage leads to a second washroom for the home economics and art departments.

The blueprints and architect's layout for the building had been lost, so it was not until work was started on the remodeling that it was discovered that some of the walls had vents in them and that the ceiling of the room beneath the physics lec-



Above: The easy-to-handle light board can be run by two students.

Below: Elizabeth Buckmaster storing scenery in the property room.

ture room was curved. The cost of laying a level floor for the workshop was estimated at \$1500. As the total sum to be raised could not exceed \$10,000, this leveling had to be abandoned.

The administration and trustees agreed to the scale-drawn plans submitted to them by the drama director and felt that no architect's plan need be commissioned. The college architect looked over the plans and estimated that the cost of remodeling would be about \$7500. This amount would cover the removal of walls, the erection of three girders and supports, the laying of auditorium tiers and stage floor, and the installation of a short fire escape backstage. The fire escape, serving the upper floors, came down beside the rear of the auditorium and only the exchange of a classroom door for one of the existing windows was necessary.

STAGE PROPORTIONS

To get the maximum wing area, the greatest height possible, the largest playing area, and best proportioned proscenium opening, the following measurements were decided on: stage height above floor level, 18 inches; proscenium arch opening, 18 feet 6 inches by 9 feet; stage right wing, 4 feet; stage left wing, 6 feet (this imbalance was determined by the amount of supporting wall that had

to be retained to ensure the safety of the upper floors), and a playing depth of 23 feet. Behind the cyclorama curtain, there is a 9 by 28 feet area for curtain and light closets, storage racks and scene shifting.

LIGHTING

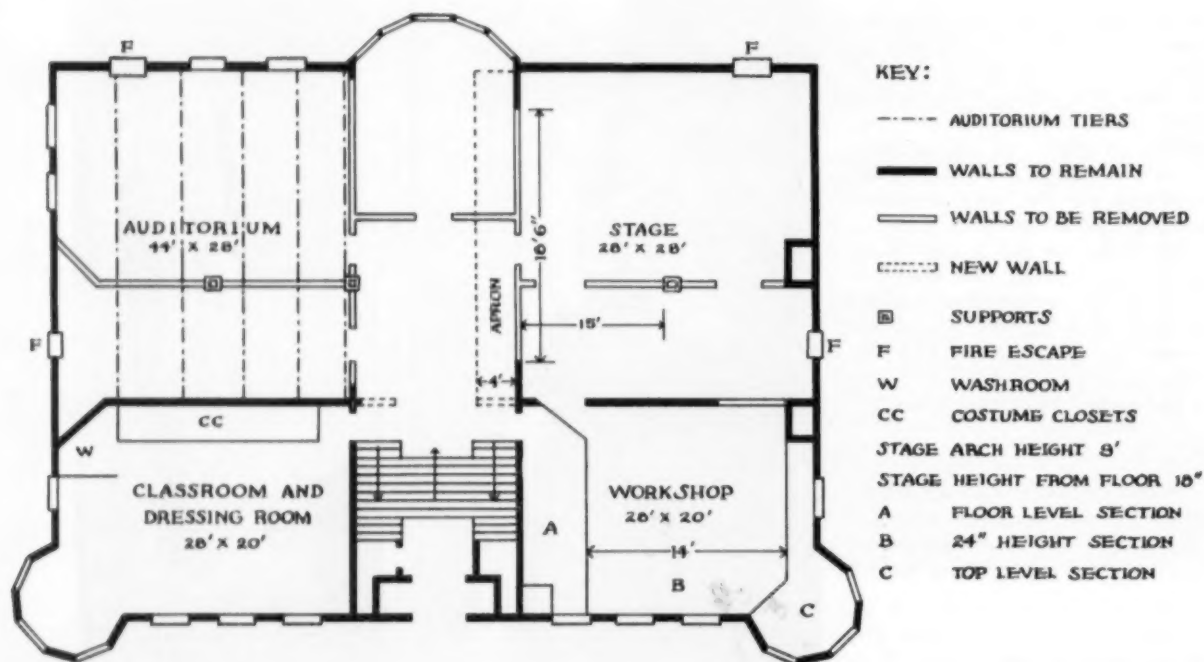
The architect's estimate left about \$1000 for lights. The electrician usually employed by the college was called in and agreed to work out with the drama director a plan to utilize the existing light equipment and to wire the stage and the unit for maximum flexibility and safety. Since the laboratory theater is an educational unit, and the girls using it arrive wholly untrained in the use of lights, the plan called for a board easy to handle and as foolproof as possible.

The result is highly satisfactory. A special cable was run in and serves the whole theater unit. The rest of the building is separately wired. The dimmers from the old light board were rewired and added to the new board, now installed in the workshop against the stage wall. With students aiding the electrician, breakers, switches and jack dimmer plugs were gradually connected. Seven stage pockets were strategically placed in the wings. The result is a flexible board that can be run by two students, the one on the dimmers having sight of the stage through a squint. Two borders were

made out of galvanized iron guttering and a third from an old footlight strip.

The lithographed plans for the unit had been accepted by the trustees late in May 1950. The work was started in July, by which time \$6000 had been raised. By early August, the three girders and supporting 5 inch pillars were in place to take the load formerly upheld by the 15 inch brick walls. By Labor Day the flooring of the stage and the five auditorium tiers were laid, and the two science lecture rooms that had been tiered were stripped. Because of the curved ceiling below it, the workshop, replacing the lecture room, had to be made with three levels. One, the previous top tier, became scenery and platform racks and, in the bay, a paint cupboard and draftsman's table were set up. Thirteen inches below this level, a flooring 14 by 28 feet was built for scene making, with tar paper below the boards to make them more waterproof. From this level slight ramps sloped down to the stage above and below the light board. The third level, 2 feet lower than the main floor, served as the entrance and bench area.

After Labor Day students and alumnae arrived to erect scenery racks and cupboards, make partitions for the property room, and help rig fixtures for the ceiling rods and curtain tracks above the stage. By the start of college on September 19, the theater was



ready for use and for dedication, though the lights were only partially installed and the painting was not begun. The funds then totaled \$8000.

THEATER ARRANGEMENT

The auditorium itself seats 150, each tier holding two rows of seats. The bay houses an old piano and phonograph, and can be curtained off, giving an extra entrance directly onto the apron, 31 by 4 feet. Directly above the front row of seats is a wide beam covering the transverse girder, and on these are six spotlights that light the apron and downstage area, all connected to the light board.

Front, half-way and back curtains were made from old material, and enough of the old front curtain was left to provide curtains for the alcove at the rear of the auditorium, the bay, and the windows. Since the old stage curtains were dull blue rep, the proscenium arch wall and the two auditorium pillars were painted a matching dull blue, but a shade darker. This shade matches the curtains both by daylight and by electric light.

The dark background to the apron area serves two additional purposes: the shadows of actors playing in front of the proscenium arch are minimized, and the audience's eyes are drawn to the lighted area behind. The dull silver trim to the "picture frame" is an additional help in concentrating attention on the stage action. The walls and ceiling of the auditorium, including the box office and the bay, are off-white, and the linoleum-tiled floor is dark brown, matching the dark mole brown of the stage front and steps.

Backstage, soundproof doors fill the downstage opening—between the stage and the workshop. An intercommunication system links the stage right (prompter's corner), the dressing room (one of the old classrooms), and property room to the light board. The costume closets are made out of the old science cupboards and the men's wooden lockers.

The dressing room can serve also as a rehearsal area, while a microphone and loud-speaker make it possible to test voices and rehearse radio scripts there for the monthly programs given over the local station. A bench and a demonstration table from one of the old laboratories give the workshop a fine carpenter and paint bench, and the lighting in the shop can either be white or a combination of the light



Rockford College students in the workshop, busy making scenery.

primaries used on the stage, so that scene painting can be tested without the flats being moved to the stage proper.

FUNDS

Most of the \$10,000 came in small contributions, with two exceptions—an alumna gift for a student union was diverted (with the consent of the donor) to the theater and the drama director emeritus, in whose honor the unit is named, gave \$1000.

Those alumnae who had majored under the retired director were first approached. Some offered services; some sent donations. One who had no funds to spare gave the check for her first story sold to a magazine. Another sent stamps to defray mailing costs. Trustees and friends of the college gave gifts in money and kind (such as the intercommunication system), and services poured in to honor their retired colleague. Students gave the fees they received from appearing in civic concerts, doing makeup for community acting groups, and baby sitting.

As money thus raised trickled in, a spotlight, for example, was bought

and appropriately named. Some of the workmen worked after hours on a volunteer basis and gave invaluable assistance to student carpenters and electrician's "mates." The plumbers erected the stage tracks and overhead pipes for lights and curtains.

In less than 18 months the \$10,000 was raised and a maintenance fund was started. Within two years that fund was sufficient to buy enough black duvetyne to make a new set of surround curtains, teasers and tormentors, and leave some over for a new spotlight.

The practicality and the esthetic beauty of the laboratory theater are acknowledged by all who visit or work in the unit. Those who contributed their labor can take real pride in their achievement and the knowledge that they saved at least \$600 by their efforts. All contributors and the permanent members of the Drama Club receive a bulletin to keep them informed of forthcoming productions, news of graduates, additions to the unit, and current needs.

Results: problems solved, space well utilized, funds raised, and available materials successfully incorporated.

Master-Planned

to house 5000 students

**New State College at Long Beach, Calif.,
has 320 acre site. Administrator and
faculty decide on teaching stations needed;
architect groups stations into useful buildings**

RUEL J. TAYLOR

State Department of Education, Sacramento, Calif.

HUGH GIBBS

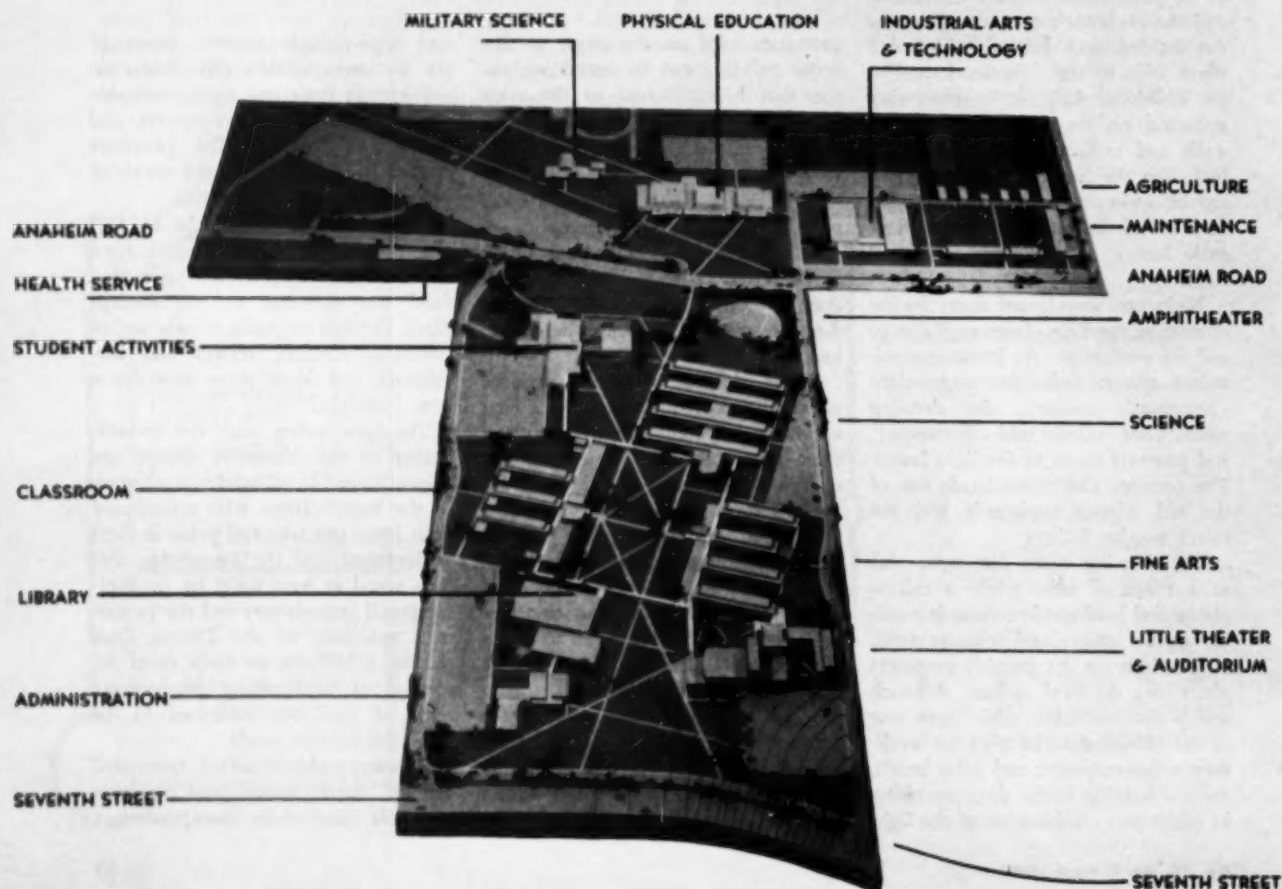
Architect, Long Beach, Calif.

LONG BEACH STATE COLLEGE, NOW under construction in California, will serve southeast Los Angeles and Orange counties. With a population of 1,057,552 in 1947, it is estimated that there will be 1,750,000 in this area by 1965.

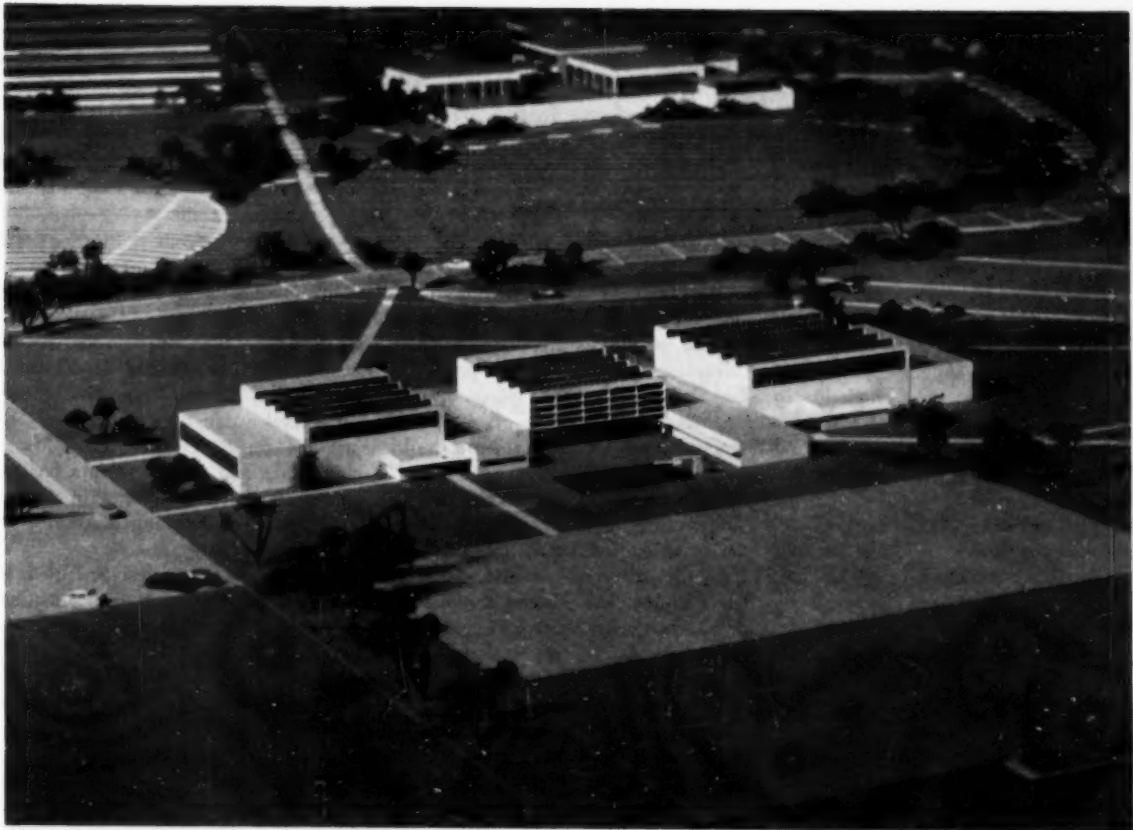
The new college will have an initial student capacity of 3000 students, but it has been master-planned ultimately to house 5000 full-time students. This will require approximately 180 teacher stations in addition to a gymnasium and pool for both men and women; a student union and cafeteria; an administration building, and a library.

The classrooms and laboratories were grouped into the following buildings: Industrial Arts and Technology, 70,558 square feet; General Classrooms Building, 78,441 square feet; Science Building, 134,500 square feet; Fine Arts Building and Auditorium, 136,738 square feet.

The state department of education's formula on room requirements and

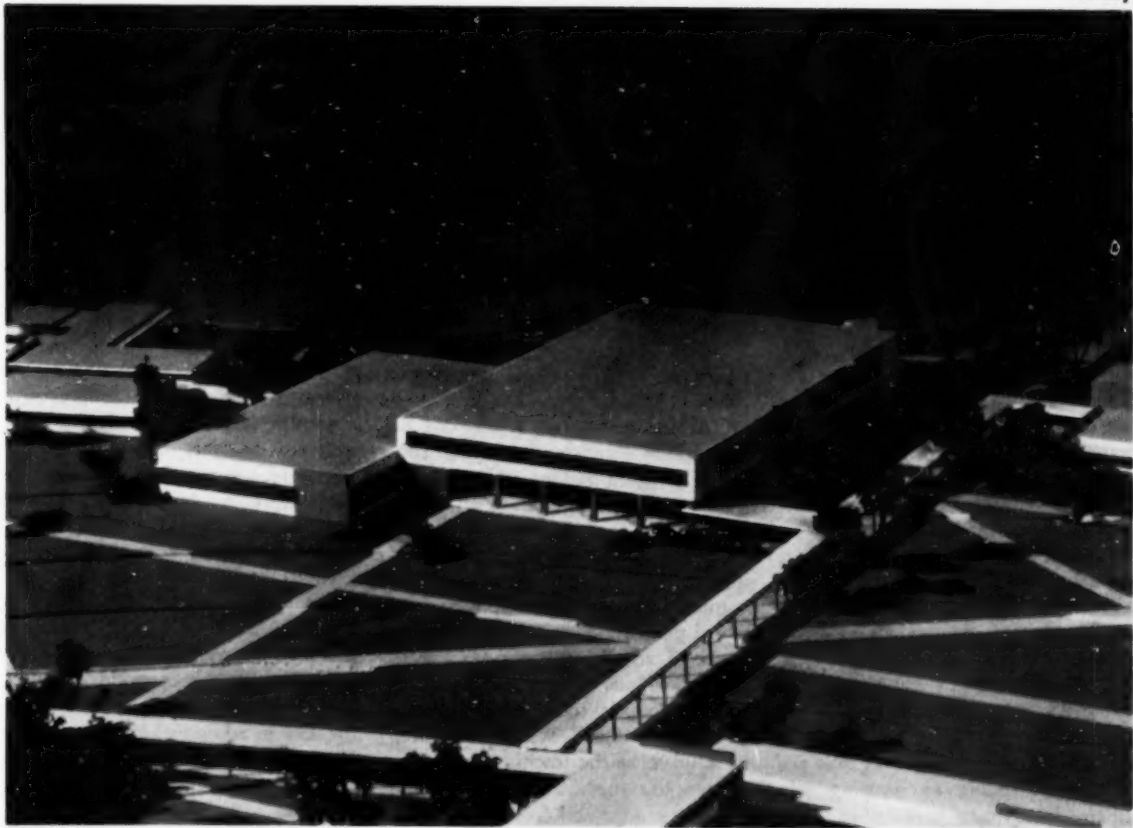


KEY PLAN OF BUILDINGS.



Physical Education Building, Rear View

Library



standards was used to determine the space requirements for each proposed building. The faculty and administration at the college, based on experience gained in existing state colleges, grouped the assigned teaching stations into useful buildings. Each major building will contain a large lecture room in addition to the allotted smaller classrooms and seminar rooms.

Because money for buildings is appropriated by the California legislature on an "as you need" basis, the flexible and expandable finger design was chosen. This wing type, single-loaded corridor, two-story type of construction also serves to admit good natural light and ventilation; it reduces travel distance between classes and also the cost of utilities, which might be reflected in a lower building cost per square foot.

SITE

The site of Long Beach State College is a 320 acre parcel of the old Bixby ranch on the east side of the city of Long Beach. The building area of 60 acres was chosen for the academic building group because of its elevation; it slopes gently to the north, looking toward the city of Los Angeles. A rectangular piece of land 1200 by 220 feet was found to be ample for the major academic building group, not including the gymnasium and athletic fields, the industrial arts and technology fields, and ornamental horticulture areas.

MASTER PLAN DEVELOPMENT

The architect was employed by the California Department of Public Works to master-plan this college, created by legislative act in 1948. Before the master plan could be undertaken, considerable time was spent in developing plans for wood frame temporary classrooms so that the college could move out of its first home in an apartment house onto its own campus. This was done during the summer of 1951.

In the planning of Long Beach State College, every effort was made economically to utilize to best advantage the natural features of the site through a rational, efficient and convenient arrangement of the various elements of the campus.

The master plan study began with an analysis of the 320 acre site and included such pertinent points as:

1. *Relation to surrounding area and population.* Being an outlying suburban district, automobile and bus

access was a primary consideration; extensive parking facilities were mandatory also. The principal approach is on Seventh Street from Long Beach southwest of the campus, with secondary approaches from Lakewood on the northwest and Orange County to the northeast.

2. *Topography of site.* The flat, low terrain of the north portion made it the obvious location for the athletic and agricultural fields, just as the high ground of the south portion with its advantages of exposure to prevailing breezes and views, coupled with its easier accessibility from all directions, seemed ideal for the academic buildings.

3. *Orientation.* To obtain the desired north light and to exclude the undesirable direct early morning and late afternoon sunlight and glare, the exact angle of the classroom wings was determined graphically with sun angle charts.

With these major conclusions and a multitude of minor ones, we proceeded to relate the individual buildings to the site and to one another, according to their logical academic or nonacademic functions.

GROUPED IN QUADRANGLE

The closely connected academic buildings (library, classroom, science and art) were grouped in a rough quadrangle to form the heart of the master plan. The Administration Building at one corner of the group was located at the most accessible entrance to the campus; the cultural center (auditorium, little theater, and art gallery) was placed at the Art Building corner and opposite the Library, and diagonally across the quadrangle was placed the social center (Student Activities Building). This entire group comprising the upper campus is tied together with a series of covered walks and is serviced on all sides by perimeter roads with strategically spaced parking areas.

The remaining buildings and facilities are more isolated according to their importance, amount of usage, and space requirements.

Important new trends in over-all school planning were studied and evaluated. A rehash of outmoded expensive schoolhouse design or an expensive monument to a dead past was studiously avoided. We tried to keep in mind what the teachings might be in years to come; what the plan would cost; what good and economical mate-

rials and methods could be used that would call for a minimum amount of maintenance. We wanted to eliminate waste in each interval of future expansion, realizing the tremendous savings in dollars to be realized when careful studies are made toward flexibility and expansibility in the master plan.

To sharpen up our proportions and to determine use of materials, many shop models were made of various parts of the buildings. A scale model of the master plan also was constructed so that the college could be displayed intelligently to the community. Another real value of this model is to stir the imagination of the students themselves and to give them a feeling that they are participating in a program that is advancing according to an orderly plan.

The buildings are designed in flexible, modular units so that they can be adjusted and expanded to meet curricular changes, without having a raw, unfinished look in their varying stages. For these various expansion programs a detailed cost breakdown was ascertained in advance. This detailed study provides an efficient, orderly program without expenditure allotments being disrupted. Financial programs can now be arranged in advance more intelligently.

STUDY SUN CONTROL

A great deal of time was given to the study of sun control. Computations, models and graphs were made for all conditions in order to reduce the brightness ratio and to bring brightness under control. The object, of course, was to obtain correct luminosity, which is the finest characteristic of good contemporary design.

The college has made phenomenal growth. From 200 full-time students in its first year, 1949-50, it has grown to 1800. Projecting this growth to an ultimate of 5000, assigning these projected students into student stations, and grouping those student stations into useful buildings constituted our job.

Bids were received on the first units of construction (about 124,000 square feet) in February 1953. These first buildings are the library, classroom building, gymnasium, fine arts building, and a little theater. A cafeteria, administration building, science building, and an additional classroom wing will be badly needed for the estimated enrollment of 2500 full-time students by 1958.

T. E. BLACKWELL
Vice Chancellor and Treasurer
Washington University, St. Louis



An Inter-State Conflict of Interest

Texas and Arkansas in controversy over grant from foundation holding charter from Texas

IN 1923, WILLIAM BUCHANAN, A citizen and resident of Texas, executed a conveyance of personal property to trustees under an instrument of gift reciting that it was his purpose to create and endow a charitable corporation to be known as "The William Buchanan Foundation" in the city of Texarkana. The trustees accepted the trust and obtained a charter for the foundation from the state of Texas. By the terms of the charter, the trust "shall be administered in Bowie County, Texas, but for the benefit not only of the citizens and residents of said county, but also for the benefit of citizens or residents of adjoining counties, as well as for the benefit of such other persons as, in the judgment of the Trustees, should receive the benefits of the activities or institutions established hereunder."

Some months ago the board of trustees of the University of Arkansas sought and obtained a grant of \$500,000 from the foundation for the construction of a 100 bed pediatric floor in a new hospital to be erected in the Arkansas State Medical Center.

STATE FILES SUIT

In reliance upon its agreement with the foundation, the University of Arkansas let contracts for the construction of the hospital. Work had progressed to the sixth floor when the university was informed that the state of Texas, acting through its attorney general, had filed suit in the Texas courts to enjoin the foundation from

making the grant on the ground that, under Texas law, the trust funds of the foundation must be expended for the benefit of Texas residents.

The state of Arkansas immediately filed suit against the state of Texas in the Supreme Court of the United States, invoking the provisions of the federal Constitution (Article III, para. 2) granting the court original rather than appellate jurisdiction in litigation between the sovereign states of the federal union.

The state of Texas denied that the controversy was between two states on the ground that the injured party was not the state of Arkansas but the University of Arkansas.

The court, in its opinion of Nov. 13, 1953,* delivered by Justice Douglas, disposed of this contention with the following paragraph:

"As we read Arkansas law, the University of Arkansas is an official state instrumentality; and we conclude that, for the purpose of our original jurisdiction, any injury under the contract to the university is an injury to Arkansas."

The courts then proceeded to deal with the central question at issue, *i.e.*, whether the William Buchanan Foundation, a charitable corporation, has authority, under its Texas charter, to

expend its funds for the benefit of the citizens of Arkansas, as follows:

"That is necessarily a question of Texas law, for the foundation gets its existence and its powers from Texas. Texas courts speak with authority on this issue. Litigation is now pending in the Texas courts which will authoritatively determine what the Texas law is. We therefore follow the course we have taken in analogous situations . . . and continue the present motion until litigation in the Texas courts has been concluded. If that litigation resolves the whole controversy, leaving no federal question, there will be no occasion for us to proceed further. It is so ordered."

FILE DISSENTING OPINION

Four of the nine justices, led by Justice Jackson, filed a dissenting opinion against the order of the court to retain jurisdiction. They reasoned as follows:

"What is the meaning of holding this case on the docket? We think the Texas courts should be left to decide their state law questions without the threat implicit in keeping this case alive. . . . The only basis for our holding the suit is to 'ride herd' on the Texas courts, on the assumption that it may deny Arkansas some federal right. We ought not to entertain such a possibility in the administration of justice of one state against a sister state. Of course, Arkansas will get justice in Texas, just as Texas would get justice in Arkansas."

*State of Arkansas *v.* State of Texas, 74 S. Ct. 109.

Ark. Acts, 1871, No. 44. Ark. Stat. 1947: Para. 80-2801, 2802, 2804, 2817. Jacobs *v.* Sharp, 211 Ark. 865; 202 S.W. 2d. 964.

The Trustee's Function in Regard to the College Budget

D. J. HORNBERGER

Vice President and Treasurer
Ohio Wesleyan University
Delaware, Ohio

UNDER PRESENT ECONOMIC CONDITIONS, the college budget is receiving far greater attention than it has enjoyed for some decades. Proper controls with considerable flexibility are becoming a necessity in budgeting for any well managed institution because (1) costs have a habit of changing rather rapidly; (2) investment returns increase comparatively slowly; (3) tuition and fees are at a record high. The result is that the budget is especially important to the governing bodies of such institutions, as well as to the individual trustee who takes his obligation seriously.

A THING OF THE PAST

The day of preparing a budget for an institution in the spring of the year for the operations of the following year is rapidly becoming a thing of the past. The economic situation is forcing a thorough consideration of changes; such changes force—at times quickly and drastically—the financial operations of the institution concerned. The days of budgeting on a cash basis *only* are disappearing for most schools. College financial officers are turning more and more to the accrued basis as the primary budget method with the cash budget of a secondary nature, though still of primary importance to the cash situation. Schools recognize today the depreciation of at least specific types of assets. Tax changes on farm and investment properties are forcing changes on institutional policies of investing.

Competition for the raw material, the student, is resulting in a real need for increased expenditures in promotion, testing and public relations. Higher tuitions bring a greater need

for scholarships. There is demand for better and more expensive living and social facilities. Those responsible for the welfare of their institutions are concerned as to where these changes are leading. How can we finance the ever-changing needs today? How can we prepare for the needs of the next decade with the facilities at the present high rate?

These, among others, are the problems facing the financial officers of the colleges. They are of utmost importance to the trustee interested in providing for his college the type of program of which the clientele of the institution may be proud and which they should logically expect. A good academic program is most difficult to operate without proper and adequate financing both from the short-term and long-term point of view.

HOW MAY BOARDS AID?

For some years the functions of the college trustee have received a great deal of attention and the general agreement that trustees are policy makers has long been established. What policies are of paramount importance in consideration of today's college budget?

The foremost factor in budgeting for any institution revolves around the college program, not only for the specific year at hand, but for the years ahead. A good budget requires the close cooperation not only of the trustees and the financial officers of the institution but that of the responsible personnel—academic and non-academic—with a keen appreciation of the total problems within the group. To obtain this appreciation and to accomplish the objectives set up with



that may be used or carried forward from year to year if it is not needed in any one year. A provision of approximately 2 per cent of the total income each year is frequently sufficient to provide for such contingencies. This eases the operating problems from year to year and assures a provision for meeting emergencies or changed conditions.

Therefore, the first place that the trustee may be of utmost importance is to see to it that the members of the administration are budget-conscious, policy-conscious, alert and capable of watching trends and changes, both locally and nationally, that may affect the well-being of the institution.

The second policy of extreme importance under present-day conditions is that of assuring flexibility. Frequently many of the costs of an institution are fixed in nature. Salaries, once set, are difficult to adjust. This is true also in plant and residence hall costs. There is nothing quite so ruinous as cutting appropriations in the middle of the year after they have been established and given to the department heads as a guide for the year.

The third place wherein the trustee may be of aid in the budget operation is to insist that the budget be in balance and that deficits do not pile up year after year. Continued deficit financing frequently becomes a "disease" difficult to control, mortgages the future program, and sooner or later is bound to become a serious threat to meeting the demands of the operations of the college. There are times when this is unavoidable, but good financing dictates that deficits be cleared before they become a burden and hamper the operations of the institution. The trustee should be assured that provision is made for caring for deficits in a business-like manner, and that they are not allowed to continue year after year.

A fourth consideration is that the trustee be assured that capital funds are properly handled and *not* used for current purposes. This problem may become a complicated matter, but it is one that requires careful and full consideration.

where the properties are gifts and the donor does not or did not expect the value of the property to be recovered during its life. Too often purchases of such properties are made from capital funds when no such expectation of the donor existed. In such cases as the latter, depreciation should be set up as a general rule in order to protect the original gift. Such practices are being adopted by a greater number of schools today and in the long run will react to the benefit of the college, though reducing the current income throughout the life of the asset held.

Finally, the trustee should assure himself that adequate controls and reports are available currently for his protection. Monthly reports should be a "must" at least with a monthly breakdown in detail. A breakdown of the budget by months should be available, not only on the accrued basis but also on a cash basis. This would show the operating officers to what extent they are keeping within their estimates and would assure the trustee that the operations are under adequate supervision.

A budget is a forecast. Monthly estimates may be at odds with actual results, but the time to correct differences is when they happen and not at the end of the year when little can be done about them.

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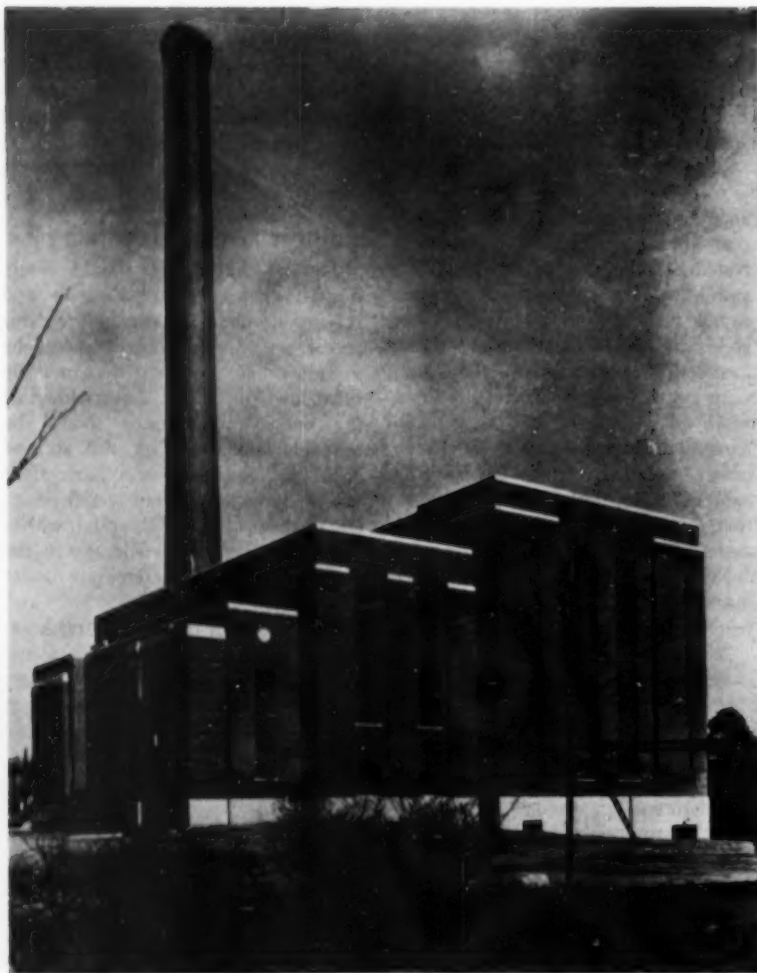
How to select the right materials
and technics for dampproofing and

Waterproofing Masonry Surfaces

First of two articles by

LESTER S. RIES

Superintendent of Buildings and Grounds
Oberlin College, Oberlin, Ohio



DAMPPOOFING AND WATERPROOFING seem to be perfectly understandable until one starts to think about them. Do we want to consider the flow of moisture from the outside of the wall to the interior surface, or from the interior of the wall to the outside surface? Should we consider a complete barrier to moisture so that the wall will not breathe, or should our investigation be confined to a certain amount of moisture or vapor movement in and out of the wall with the dampproofing or waterproofing application retarding the movement and localizing or minimizing the water damage in the masonry? Are we thinking of some additives to materials, such as concrete, or surface applications after the material is in place?

In the *Bulletin of the American Society for Testing Materials* for January 1951, William M. Spurgeon states: "A distinction is made here between waterproofing materials, used on walls subject to considerable hydrostatic pressure, and dampproofing materials, used on dry walls subject to little or no hydrostatic pressure and taking in water mainly by capillarity."

In approaching the subject I have tried to classify waterproofing or water-repellent materials on the basis of their chemical family. An attempt to classify them on the basis of their physical characteristics did not yield any better result. However, a start had to be made, so the classification I am using is: (1) oils and paints; (2) petroleum and coal derivatives; (3) waxes; (4) metallic soaps; (5) silicones.

From this classification one will readily see that additives to concrete, such as pozzolith, are not being considered; impregnating concrete or mortar surfaces with iron filings and installation of sheet aluminum barriers are excluded.

Our interest here is exclusively in some type of masonry surface. An important characteristic of all masonry surfaces is that they breathe. There is a continuous movement of water vapor in and out of the capillaries of the material. The movement is expedited by temperature change. For a given set

From a paper presented at the 1953 convention of the Association of Physical Plant Administrators, Auburn, Ala.

of conditions every masonry wall has a moisture gradient.

In the case of a wall with both sides exposed to the elements, such as a masonry fence, moisture is advancing or retreating in the wall, depending upon the amount of moisture in the air, the temperature of the air, the temperature of the wall (exposed to sunshine or shade), wind velocity, and the impingement of rain drops.

If the wall is a part of a heated building the temperature gradient affects the problem. The vapor pressure from the interior forces the moisture into or through the wall until it reaches the dew point and continues to exert pressure tending to force the water through the wall. In a building wall there is always a moisture gradient and a temperature gradient. In order to maintain the integrity of the masonry it is important that some portion of the masonry transpire or breathe. Breathing in masonry is an important part of this waterproofing problem.

A certain skill is assumed in the actual application of the material to the masonry surface. The pre-application preparation, the actual application of the material, and the post-application care all require a reasonable amount of judgment. The following discussion is based on this premise.

OILS AND PAINTS

Virtually all oil-based paints when applied to a surface on which bonding occurs successfully waterproof and repel water from one side only. Most of the oil-based paints seal the surface on which they are applied and form a water or vapor barrier from one direction. Destruction of the bond occurs in two ways: (1) by water vapor pressure developing on the under side of the paint layer and blistering the film, and (2) by breaks in the paint film caused by successive expansion and contraction of the material on which the paint is applied.

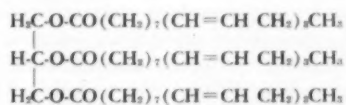
Rubber-based paints were thought to overcome some of the shortcomings of ordinary paint failures caused by expansion and contraction, but the rubber molecules in the paint rarely form a continuous film and, as a result, such failures have not been entirely eliminated.

The vehicles in paint are in themselves water repellent. Linseed oil, tung oil, soybean oil, and other vehicles, when applied to masonry surfaces, dry slowly and form a thin, gummy film. When these oils are applied in very

thin layers the wall breathes. However, they have several serious disadvantages. Because these oils generally dry to a gelatinous consistency the dust from the air clings to the surface; the oils change the appearance of the masonry material; sunlight breaks down the molecular structure, and in some cases the resultant compound is water soluble. All of these materials have to be renewed in a relatively short time, depending upon the exposure to which they are subjected.

Linseed oil is manufactured from flaxseed and varies in color from light to dark amber, depending upon the location in which the flax is grown. Linseed oil is used both in the raw and in the boiled state. The raw oil is lighter in color than the boiled linseed oil.

The chemistry of the oil is also variable, depending somewhat upon the source. It contains glycerides of linolenic and linoleic acids. The formula for the glyceride of linolenic acid is as follows:



Linoleic acid has two double bonds per molecule instead of three double bonds as shown here for the glyceride of linolenic acid. Oleic acid has one double bond per molecule and stearic acid has none. The drying process consists of an oxidation by air and a polymerization involving the double bonds.

The composition of a typical linseed oil expressed empirically is as follows:

- 5 per cent stearic acid
- 15 per cent oleic acid
- 40 per cent linoleic acid
- 35 per cent linolenic acid
- 5 per cent glyceryl radical

Tung or China wood oil is obtained from the seeds of certain trees that grow in China and has been used in the Far East for centuries. It serves as a natural varnish and the Chinese have used it in making their boats waterproof, in decorating their houses and their furniture, and in waterproofing their paper umbrellas, to name a few of its applications. The Chinese also use it as building material when mixed with sand, clay and lime.

In this country tung oil has long been used in the manufacture of linoleum and in certain varnishes. The raw oil from the presses varies in color from light amber to the darkest brown.

It contains about 85 per cent glyceryl eleostearate and has a specific gravity of 0.94. The formula for eleostearic acid is as follows:



The drying process is similar to that for linseed oil.

Two general types of cement paints are used for dampproofing exterior wall surfaces—cement water paint and resin emulsion paint.

The composition of cement water paint is basically Portland cement to which other materials are added that are hygroscopic; a pigment is generally included. A typical composition is something like this: Portland cement, 89 per cent; titanium dioxide, 4 per cent; salt, 2 per cent; stearates and insolubles, 5 per cent. Portland cement content can vary from 50 to 90 per cent, and the hygroscopic materials, salt or hydrated lime, from 2 to 40 per cent.

The cement water paint film is hard, strong and brittle. The appearance is dull to semigloss and, when properly cured, presents a surface not too different from the shell of an egg. The paint can be any color desired and it has good hiding power.

APPLY WITH BRUSH

After the powder is thoroughly mixed with water, according to directions, the paint should be applied by means of a large brush, preferably one with fairly stiff bristles. The application must be made on a wetted masonry surface and brushed on vigorously. It is necessary to keep the water paint surface dampened for from three to five days following application in order to cure it properly. The post-application dampening period allows the crystals to develop in the material. If the surface is allowed to dry immediately after application or if the wetting process is not continuous for sufficient time, then the surface develops an amorphous powder that is readily washed away.

The properly cured surface absorbs moisture to a limited extent but acts as a dampproofing agent to the masonry surface that it covers. The cement paint surface provides a satisfactory film that allows the masonry to breathe; i.e. the pores in the cured coat are of sufficient number to allow the passage of gases but small enough to prevent large quantities of water vapor from penetrating.

The water paint surface clings to the masonry surface when properly applied

but develops fine checking or "map cracking," as it is called. This is the normal behavior of the water paint surface, and the cracking process continues until cracks of sufficient size develop that render the surface vulnerable to rapid deterioration. Depending upon the exposure, applications are effective for a period of several years. Chalking of the surface is normal after application.

Resin emulsion paints are available as pastes and are furnished by vendors generally with pigment added. The composition of resin emulsion paints is as follows: titanium dioxide, silicates, magnesium, aluminum and calcium, and in some cases mica and casein. The pastes, as sold by the vendor, contain the items indicated prepared in a glyptal resin.

The paste is extended by the use of water in proportions recommended by the manufacturer. It can be sprayed or brushed on and requires from one to two coats, depending upon the surface to which it is applied, in order to get the proper result. The masonry surface must be dry before the resin emulsion paint is applied. The paint dries satisfactorily in from two to 10 hours and is generally suitable for a second coat after 24 hours. Vigorous brushing into the masonry surface is advisable when application is made by brushing.

The dried surface is smooth and opaque, and presents a flat finish. The surface has a tendency to check, much like the water-base paints but probably not as rapidly. The dampproofing of masonry surfaces with resin emulsion paints, if properly applied, is about the equal of the water-base paint application.

PETROLEUM, COAL DERIVATIVES

The residual products in our modern petroleum cracking plants contain waterproof and water-repellent materials in great variety. They are known as pitch, tar and petroleum asphalt. The lighter hydrocarbons that are drawn off before these heavier residues are available are also water repellents but, because they are not generally used in waterproofing techniques, I will confine my remarks here to the heavier materials.

Pitch, tar and asphalt were obtained from the distillation of coal for many years prior to the development of petroleum refineries. Production of these products from coal distillation is still an important source. Little is known about their composition, but

they are thought to consist of colloidal carbon dispersed in heavy oil.

Pitch (black hydrocarbon) has been used for roofing and foundation waterproofing for centuries. It is obtained from the distillation of coal tar, petroleum or wood. The composition of pitch varies, but it has a characteristic of being hard and brittle at normal temperature, has a flash point of about 250° F., a melting point of 140 to 240° F., and a specific gravity of 1.10.

Pitch must be applied hot on a clean surface. It readily bonds to dry masonry surfaces and serves as a water barrier. It is particularly recommended for foundation waterproofing where earth covers the application, so that the temperature changes are not too great or too violent. The surface to which pitch is applied does not transpire or breathe. When used on roofs, it is frequently impregnated with fine gravel or crushed stone.

Tar is similar to pitch, and is used for virtually the same purpose. It is considerably less brittle than is pitch. The composition of tar varies depending upon the material from which it is distilled. A typical analysis would be: carbon 90 per cent, hydrogen 5 per cent, nitrogen 1 per cent, oxygen 3.5 per cent and sulphur 0.5 per cent.

Tar is prepared by distillation at temperatures lower than are necessary in the preparation of pitch. The coal residue is approximately 50 per cent tar and 50 per cent pitch. Tar used for dampproofing and waterproofing has a specific gravity of approximately 1.1, and the softening point varies from 140 to 160° F. The material is black and opaque and is not generally applied to masonry surfaces except where these surfaces are covered by earth. Tar must be applied hot on a dry masonry surface. When exposed on vertical surfaces the material softens readily in the sun and curtains. It is not as brittle as pitch. The masonry surface to which tar has been applied is impervious to moisture and does not breathe.

The term "asphalt" covers a wide range of black hydrocarbons that are prepared by the distillation of coal or petroleum. There is also a native asphalt occurring in widely separated locations over the earth. The locations best known are in the 100 acre lake on the island of Trinidad in the British West Indies, and in Colorado where "gilsonite" is found.

For waterproofing and dampproofing purposes asphalt is sometimes prepared as an emulsion and applied in

coats to masonry surfaces. The softening points range from 145 to 170° F. with flash points from 350 to 400° F. The emulsion is a mixture of asphalt and clay in water to which asbestos fiber is sometimes added. The emulsion is brushed on with a fairly stiff brush to a reasonably dry surface. When the material is mixed to a stiffer consistency, troweling is the method of application. More often the first coat is thinned and applied by brush and the second coat is troweled on. If a third coat is necessary for proper protection, Portland cement is added to the emulsion and is troweled on. When exposed to the air the residual oils in asphalt evaporate and the surface film of the asphalt becomes thin and hard. It is used principally for foundation waterproofing and on roofs. When asphalt compounds are used on masonry surfaces they are sealed and no breathing takes place. Waterproofing compounds of the asphalt type have great permanence.

WAXES

Up until a generation ago waxes frequently were used for dampproofing and waterproofing. Originally beeswax was the material used and it still is giving service in many localities. The composition of beeswax varies. A typical wax is an ester of cerotic acid, $C_{25}H_{51}COOH$, and myricil palmitate, $C_{30}H_{61}OH$, with small quantities of fatty acids and alcohols. It has a melting point of 115° F. and a specific gravity of 0.97. Other waxes may contain many esters formed by the combination of a molecule of fatty acid and a molecule of monohydric alcohol. The name "wax" is also applied to petroleum derivatives that have a waxy appearance but are largely stearates or paraffins. Other natural waxes are found in carnauba wax from Brazil, and lanolin, the wool wax from sheep.

When applied to masonry surfaces, waxes generally are in an emulsion or in solution of a solvent that is volatile. Waxes penetrate the pores of the material and stain it. The wax application leaves a sticky, semiglossy surface that tends to catch dust and deteriorates from the ultraviolet rays of the sun. When applied to exposed surfaces in temperate climates it is necessary to renew the wax application at intervals of from one to five years.

This discussion on dampproofing and waterproofing masonry surfaces will be continued in the May issue of College and University Business.

Don't Plan Too Many Small Classrooms

A. C. LAMBERT

Chairman of Building Committee
Los Angeles State College of Applied Arts and Sciences

COLLEGE PLANNERS SHOULD NOT plan too many small classrooms, for the disadvantages outweigh the advantages. While no one can place a neat numerical definition on the term "too many," the point still has significance.

WHAT IS A SMALL CLASSROOM?

A room 16 feet wide and 19 feet long seated with tablet-arm chairs in rows 36 inches apart, and so arranged that each student has 24 inches side space and the teacher has 7 feet of free space across the front of the room between the wall and the first row of seats, will accommodate 18 students if a rear aisle of 3 feet is allowed and two side aisles of 24 inches each are allowed. When two side aisles of 36 inches each are allowed, the room will accommodate 15 students.

If the same room is equipped as a seminar room with one long central table and chairs it will accommodate from 12 to 14 students. If two tables set crosswise are used and if chairs are crowded around both sides of both tables, 18 or 20 students can be accommodated. A room 15 feet wide and 18 feet long equipped with tablet-arm chairs will accommodate 15 students, and will leave proper space for the teacher and for aisles. A room 13 feet wide and 27 feet long equipped with two 10 foot tables set end to end and rimmed with chairs to operate on a seminar basis will accommodate from 16 to 22 college students and one or more instructors. Such rooms can be called small classrooms.

SOME SMALL CLASSROOMS NEEDED

Some small classrooms must always be present in a college plant to serve certain kinds of graduate programs, to serve the classes of young departments during their growth periods, to sup-

port various try-out curriculums, and to handle odd-size sections during registrations and following the readjustments in study lists.

However, there is no point in planning an entire plant on the patterns and needs of a promotional type of college. Neither is there any point in applying room utilization criteria of a young and growing college to a mature plant and college, and vice versa.

Some argue that numerous small classes in small rooms are needed in subject areas other than the physical sciences and outside the graduate seminars. The main argument is that breaking up large sections of 40, 60, 80 or more undergraduate students of the social and political sciences into classes of 16 or 20 students who meet around a table in a small room increases student interest, invites and sustains discussion by individuals who would otherwise remain silent and bored in the large sections, and thus, by argument, furthers the numerous teaching aims of social and political sciences in a democratic social order. Another argument is that the use of small round-the-table sections permits teachers to become acquainted individually with students, and this results in attaining additional educational advantages.

These, and others, are all good arguments for small sections and for small classrooms to serve them. But administrators must still consider numerous factors that arise from the variable competencies, aptitudes, wishes, specialties and personalities of instructors even within a given department; they must also consider the costs of building construction and the unit costs of classroom teaching. No one wishes to put the materialism of costs ahead of

true educational efficiency, but no building planner, no budget administrator, and no schedule-maker can ignore costs.

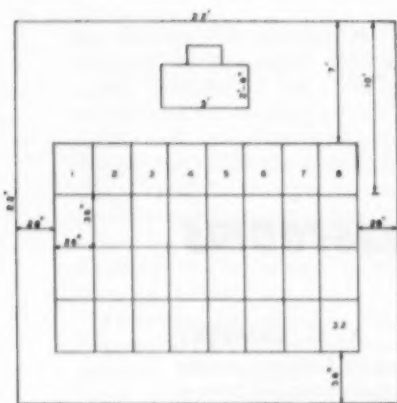
SOME DISADVANTAGES

Small classrooms in the aggregate tend to require an unduly high proportionate allotment of total floor area for teacher-space and for walls and partitions. They tend to eliminate adequate aisles, for even if proper aisles are planned the tendency is to shove "a few more" seats into those small rooms and thus consume aisle space and rob individual occupants of space they normally should have.

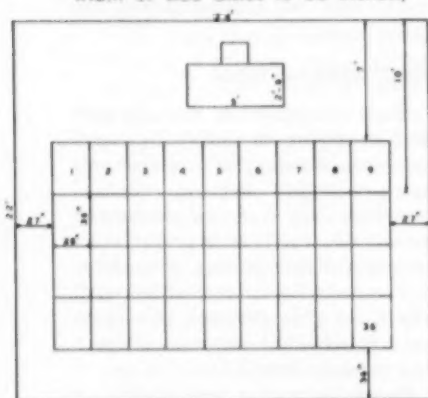
The presence of a large number of small classrooms increases rather than facilitates the work of schedule-makers for the simple reason that as a whole small rooms are relatively inflexible, being adapted only to classes that cannot make use of much or any equipment and being available for small sections only.

The presence of numerous small classrooms invites or even occasionally propagates an indefensible proliferation of courses and an endless subdivision of content within a department. They invite and they may sustain a multiplicity of pet courses and special offerings that are urged by enthusiastic individual instructors. But excessive proliferation of courses and multiplication of small classes increase initial construction costs, increase the costs for faculty, increase the unit costs of classroom instruction, and prevent administrators from getting average class size and minimum class size up to defensible levels.

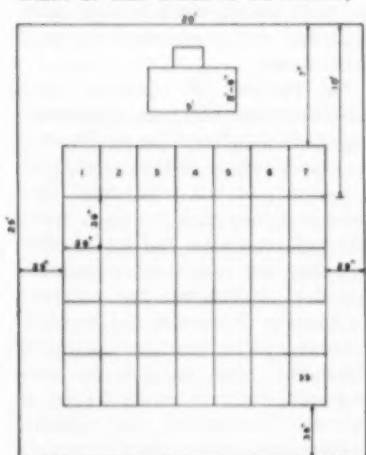
No one wants too many large rooms either, or poorly used rooms of any size. But certain college plants that might occasionally show smaller per-



Suggestion for a minimum size general classroom for 32 college students. (Use of 24 inches side space per station will increase width of side aisles to 36 inches.)



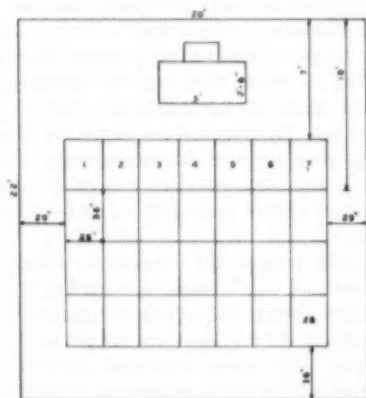
Suggestion for a minimum size general classroom for 36 college students. (Use of 24 inches side space per station will increase width of side aisles to 36 inches.)



Suggestion for a minimum size general classroom for 35 college students. (Use of 24 inches side space per station will increase width of side aisles to 36 inches.)

centage station utilization of large rooms could, in fact, be achieving greater financial economy and greater educational efficiency than are plants that could simultaneously show a very high percentage station utilization when the plant is composed of numerous small rooms.

To keep a certain emphasis in the direction of medium size and large classrooms adds flexibility to the educational plant, reduces the necessity for overnumerous faculty members, permits outstanding teachers to contact more students, reduces unit costs of instruction, reduces the proportionate amount of total floor area that has to be allocated to teacher space, reduces the proportion of total cost that has to go for walls and partitions, and



Suggestion for a minimum size general classroom for 28 college students. (Use of 24 inches side space per station will increase width of side aisles to 36 inches.)

provides for growth of school population.

"RIGHT SIZE" FOR CLASSES

Planners could always construct classrooms for classes of the "right size" if only anyone knew precisely what the right size of class is. It still seems impossible to prove by dependable scientific evidence, as distinguished from frequency and vehemence of opinion and as distinguished from even the considered judgment of expert educational juries, precisely where, if at all, any given degree of teaching efficiency and any given amount of human educational growth are tied provably to a given size of class as such.

Persons who plan college classrooms must, therefore, rely upon several judgment factors in deciding the sizes of general classrooms to be constructed.

The current idea seems to be to use several sizes of classrooms, although nobody appears to know precisely how many rooms of each given size to include. The present discussion suggests that planners at least stay away from too many small classrooms. There is no point in having numerous small rooms just to satisfy the logic of a continuous distribution table. The same applies to very large classrooms.

A MINIMUM SIZE CLASSROOM

It might be possible in college plants to use a minimum size general classroom that will make good use of the floor area, will permit the use of adequate aisles, will reduce unnecessary construction costs for walls and partitions, will fit into several patterns of window openings, will fit into either single-loaded or double-loaded corridors, will permit economical internal remodeling, will house classes of reasonable minimum size, and will help to keep endless proliferation of courses and the unit costs of instruction at defensible levels.

The following room dimensions and floor areas contain suggestions for a minimum size general classroom: (1) a room 22 feet wide and 22 feet long, for 30 or 32 students; (2) a room 24 feet wide and 22 feet long, for 32 or 36 students; (3) a room 20 feet wide and 24 or 25 feet long, for 30 students.

A minimum size seminar room for use with tables and chairs could be 12 feet by 24 feet for 18 students, or 16 feet by 16 feet for from 20 to 22 students.

In suggesting these minimum size rooms consideration is given to the use of either 24 or 26 inches side space per seated student; to the use of 36 inches between rows of seats; to the use of 10 feet at the front of the room, including the first row of seats; to the use of adequate aisles on the sides of the room and at the rear; to the proportion of total floor area in a plant consumed by the nonseated portions, and to the traditional amounts of gross floor area that are to be made available to each student.

Size of class, curricular efficiency, room size, room dimensions, utilization of rooms and stations, costs of construction, costs of operation, costs for faculty, and actual unit costs of instruction are all interrelated. The presence of too many small classrooms introduces a certain extravagance into both the planning and the operation of a college plant.

Ideas That Boost Food Sales

as worked out at Student Union, University of Washington

MARJORIE TIERNAN

Director of Food Service, Student Union Building
University of Washington, Seattle

VOLUME, THE MAGIC WORD IN BUSINESS, is just as essential in university feeding programs as it is in commercial food services. Oftener than not, university feeding facilities have severe competition within their own immediate areas and it behooves them to meet this competition. Therefore, directors of university food services are becoming increasingly aware that it is imperative that they complete their food services with a planned program of merchandising, advertising and promotion.

We at the University of Washington Student Union Building, housing a main cafeteria, coffee shop, table service dining room, and party service, are keenly aware of the competition for student, faculty and alumni patronage. We are not bashful over the fact that we are in business to serve university clientele. We are proud of our food, the various services we offer, our price structure, and our building. Therefore, we have spent many fruitful hours mapping out a program of merchandising and advertising these features.

One of the best advertising media we have consists of campus periodicals. At the beginning of each quarter, a large space is reserved on the front page of the college newspaper for an eye-catching advertisement. Once a week, a two-column page-length advertisement appears in story form, entitled "The Cook's Corner." This copy stresses various food items we are introducing or promoting and is liberally sprinkled with humor and interesting tidbits mentioning campus personalities.

To cite one example of the value of our newspaper advertising: Last spring the students were conducting a student government election. We advertised as shown in the illustration on page 50. The result was that more than six

hundred pot pie dinners were sold, and today our chicken pot pie is one of our most popular entrees.

Within the Student Union Building, we have a lighted showcase in the corridor connecting cafeteria and coffee shop. This showcase is reserved for food service promotion. These promotion pieces are changed weekly; they introduce new food ideas or foods we are emphasizing, particularly in the coffee shop. This case is decorated by one of the vendors servicing us at no additional expense to us. The promotion ties in with campus or seasonal events and generally is, in the vein of campus vernacular, "real George"!

One popular exhibit was a cut-out figure of a beautiful girl in a grass skirt displayed against an exotic Ha-

waiian background. The swinging grass skirt was activated effectively by a concealed motor. This display advertised a pineapple sundae. The backbar was adorned with grass skirts and leis and, during the promotion, the employees wore leis around their necks.

This semester we are introducing a new special termed the "49'er." It consists of a chocolate malted milk and grilled cheese sandwich selling for 49 cents. The showcase depicts a caricature of a prospector mining for gold.

A lighted showcase in the corridor connecting the cafeteria and coffee shop is reserved for food service promotion, which ties in with campus or seasonal events.



The HUB Cafeteria platform:



"A
CHICKEN
IN
EVERY
POT!"

Tonight's dinner special:

CHICKEN POT PIE

(A man-size casserole chuck full of big pieces of chicken topped with a flaky crust)

Buttered new baby potatoes	Fresh asparagus
Orange and Grapefruit Salad	
Homemade Roll and Butter	Southern Pecan Pie
Coffee, Tea or Milk	

All for just 1.12

Other complete, delicious dinners
at 78 and 97 cents.

with

DIFFERENT ENTREES EVERY NIGHT

Make it a habit

DINNER AT THE HUB

Monday thru Friday

4:45-6:45 P. M.

This newspaper advertisement appearing during a student government election resulted in more than six hundred pot pie dinners being sold.

Again, a play of words has been used on the backbar—"Dig that crazy 49'er"—"This 49'er is loaded with pay dirt"—"We've discovered this 49'er is worth its weight in gold." True, it is corny, but the student clientele "eat" it up and come back for more!

SPOT-FEATURE SOME ITEMS

Realizing the student is on a limited budget and is eager to find the most for his money, we have spot-featured some items that have proved most popular. A huge frosty mug of root beer is served for a nickel and it outsells all other carbonated beverages 10 to 1. We triple-dip all our ice cream concoctions and advertise them as "3-D" (meaning triple dipped). A big mug of coffee sells for 12 cents and, though it holds only half again the measure of a regular cup selling for 8 cents, it outsells the smaller cup.

Our hamburger is called a "Husky-burger," named for our campus mascot, the Husky. It is advertised as a "grilled quarter pound of ground beef, melted cheddar cheese, tomato and lettuce, garnished with our own special 'Husky' dressing, and all tucked into a giant toasted whole wheat bun."

Our paper service, including cold drink cups, ice cream dishes, and place

mats, are designed especially for the building and are of a humorous and informative nature.

To spark sales in the cafeteria, club breakfasts, club luncheons, and complete dinners have been added to the à la carte menu. We have carefully studied our customers' likes and dislikes, deleting the unpopular foods from our menus and combining those foods that have proved most appealing. Rather than call our club breakfast combinations Nos. 1, 2 and 3, we have christened them "The Eye Opener," "Breakfast Treat," and "The Quickie." The luncheon specials are advertised as "The Big Three."

Dinner on a commuting campus such as ours presents another problem. With this in mind, we have stressed our complete dinner program with gratifying results. Again, three dinners are featured with "loss leader" items frequently used to "bait the hook." Favorites are: "A French Fried Quarter of Spring Chicken with all the trimmings for \$1.12," and "A Full Pound Rib Steak, broiled to order, on a complete dinner for \$1.50."

We also are aware that the novelty often wears off any idea, and we always keep a few tricks up our sleeves to use if this should occur. To create interest and again to boost our volume,

we converted one of two serving lines in the cafeteria into a section entitled, "The Western Bar." Here, the customer is served a generous tossed salad with choice of three dressings from a huge wooden bowl embedded in flaked ice. On the steam table are displayed a cafeteria round of beef, a baked smoked ham, and a fresh ham, all carved to order and served on toasted French bread spread with garlic butter. A selection of desserts and beverages is offered on this section, which is operated by just three employees.

Last fall a hot beef or pork sandwich with whipped potatoes and brown gravy was introduced on the cafeteria menu and immediately met with enthusiastic acceptance. Since that time, we have enlarged on the sandwich idea and have added "Fish 'n Chips" on toast every Friday, open-face corned beef sandwiches on Russian rye with French fries, and open-face hot turkey sandwiches with whipped potatoes, giblet gravy, and cranberry sauce throughout the week. All are very well received.

Another successful method of advertising we have used includes inserting informative material about our food service in literature mailed from our building to prospective students and alumni. Each quarter, the food service committee or students working with the food director write a letter (which is mailed) to all organized groups and clubs on campus informing them of Student Union food service and banquet facilities. Because our building is owned and operated by the students, we are continually striving to make them feel "at home" in the food service areas. Suggestions and constructive criticisms are received with interest.

CONTEST BRINGS PUBLICITY

The food committee of students recently completed a contest to name the coffee shop. Ballots were printed in the university newspaper and after students judged the entries five prizes were awarded for the best. The name, "The Husky Den," was chosen. Because of this contest, a good bit of free advertising was obtained in the campus periodicals as well as in the city newspapers.

We have barely scratched the surface of the possibilities in this fertile field of ideas that have boosted sales. However, we are firmly convinced from the results that our program in the Student Union has paid off.

Sexton
Quality Foods



The Caribe Hilton, San Juan, Puerto Rico



JOHN SEXTON & CO., CHICAGO, 1954

treasures of the orient

Spices rich in Oriental piquancy are milled by Sexton and delivered to you in sealed containers to preserve all their natural goodness. Herbs, also, are handled here with meticulous care and packed in the manner most convenient for your use. This superlative pastry and dessert table at The Hilton, illustrates the pastry chef's artistry in utilizing thirty-eight different Sexton products.

Sexton Sauces blend the pungency and flavor of many spices into true epicurean delights.

NEWS

**Graduate Degree in Business Management . . . California Site of Two
Conventions Next Month . . . Conduct Academic Freedom Survey . . . Fund
Raising Workshop . . . Says Students Avoid Subject-Matter Courses**

Omaha to Give Master's in College Business Management

OMAHA, NEB.—A new graduate degree, master of arts or science with a major in college business management, has been instituted at the University of Omaha. Dr. Roy M. Robbins, director of the graduate division, said that the degree program has been accepted by both the college of education and the college of business administration.

The announcement comes on the eve of the fifth annual workshop, scheduled for July 25 to 31. A faculty of 13 leaders in the field has been named by Charles W. Hoff, vice president of business management and founder of the workshop.

The new degree program was set up by Dr. Frank H. Gorman, dean of the college of education, and Dr. Robbins, with John Dale Russell, chancellor and executive secretary of the Board of Educational Finance, New Mexico, as official consultant. Requirements call for 30 hours of work above the bachelor's degree. In this program a maximum of 10 hours may be earned in the workshop and 24 of the 30 must be taken at the University of Omaha. Dr. Gorman estimated that a candidate studying full time in the summer could finish requirements in less than three years.

Robert F. Moore, vice president and director of Richardson, Bellows, Henry and Company, New York, management consultant firm, will give the opening convocation address for the workshop. In 1953, 131 men and women from 32 states were enrolled.

New faculty members for the 1954 workshop are W. Gerard Banks, business manager, College of Puget Sound, Tacoma, Wash., and Dr. Francis J. Brown, staff associate of the American Council on Education.

Returning faculty members are Donald E. Dickason, director of nonacademic personnel, University of Illinois; William G. Greenough, vice president, Teachers Insurance and Annuity Association; Harold W. Herman, editor, COLLEGE AND UNIVERSITY BUSINESS, Chicago; Elmer Jagow, business manager, Concordia Teachers College, River Forest, Ill.; James J. Ritterskamp, director of purchasing, Washington University, St. Louis; Dr. Clarence Schepps, controller, Tulane University, New Orleans, and J. D. Adwers, superintendent of buildings and grounds, University of Texas Dental School, Houston.

University of Omaha faculty members include Dr. Donald G. Emery, dean, college of adult education; Dr. Frank H. Gorman, dean, college of education, and Rowland Haynes, president emeritus.

Set Goal of \$1,750,000 for Negro College Fund

NEW YORK.—The quota for the 1954 United Negro College Fund appeal is \$1,750,000, or approximately 10 per cent of the 31 member colleges' combined operating budgets, it was announced by John W. Hanes, national campaign chairman and vice president of Olin Industries, Inc.

"This year's quota represents a \$250,000 increase over 1953," Mr. Hanes explained, "to meet increased operating costs now confronting the institutions that are members of the fund. In addition, the growing numbers of qualified Negro high school students each year seeking education require that the colleges increase scholarship aid and generally expand and improve their educational facilities." Organized Fund appeals will be made in 90 major cities throughout the country, as well as in the communities where the 31 colleges are located.

Announce Program for N.A.E.B. Convention in Pasadena May 5-7

PASADENA, CALIF.—Advance reservations indicate a heavy registration for the 33d annual convention of the National Association of Educational Buyers at the Huntington Hotel in this city, according to Bert C. Ahrens, executive secretary of the association.

The first session of the conference will be held Wednesday morning, May 5, with Roscoe Cate, vice president and business manager of the University of Oklahoma, presiding. Speakers at the morning session and their subjects are Nelson Wahlstrom, business manager and controller of the University of Washington, "Budget Preparation and Controls"; Raymond W. Kettler, business manager and controller of Purdue University, "Can Management Engineering Firms Assist in the Improvement of Management of Colleges and Universities?" and Dr. Ray Untereiner, professor of economics, California Institute of Technology, "The Economic Outlook."

The Wednesday luncheon session will feature an address on economy and education by Arthur G. Coons, president of Occidental College. Dr. F. L. Abbott, president of N.A.E.B., will preside. In the afternoon session, Henry L. Doten, business manager of the University of Maine, will preside. Henry K. Nelson, purchasing agent of Columbia University, will speak on "Progress Toward Efficiency in the Purchasing of Athletic Equipment and Supplies." The conference warm-up party will be the social highlight of Wednesday evening.

Thursday morning sessions will be under the direction of Melvin T. Tracht, purchasing agent of Illinois Institute of Technology and vice president of N.A.E.B. Ainsley G. Burks, purchasing agent of the State University of Iowa,

PREMIUM SALTINE CRACKERS*

baked by NABISCO

delicious with salads!

ONLY 1 1/3¢ PER SERVING



*Snowflake Saltine Crackers
in the Pacific States

other famous

"NABISCO INDIVIDUALS"

*You'll benefit by 6 big advantages
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"NABISCO INDIVIDUALS"

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| 1 Cut handling costs | 4 Low cost per serving |
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| 3 Crackers always fresh | 6 Close portion control |

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National Biscuit Co., Dept. 21, 440 W. 14th St., New York 14, N. Y.
Kindly send free samples and new booklet "America's Home Favorites."

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FOUNTAIN TREATS

less than
1 1/3¢ per
serving



served with ice cream



DANDY OYSTER CRACKERS

less than
2¢ per
serving



served with oysters

RITZ CRACKERS

only
1¢ per
serving



served with juices

NEWS

will speak on "Food Purchasing," and Jack S. Reaves, director of purchasing at the University of Florida, on "Problems in Equipping a New Dormitory."

Thursday afternoon will be free time for delegates to take scheduled tours of the Los Angeles area terminating at Knott's Berry Farm.

On Friday conference delegates will meet in four groups to hear about "Records and Forms for Preventive Maintenance" from William H. Her-

bert, purchasing agent of Ohio University; "Central Stores Operation" from Robert K. Tomlinson, business manager, Westtown School; "Recruiting and Training Purchasing Personnel" from Charles W. Hoff, business manager of the University of Omaha, and "Military Property Custody" from Ronald O. Roberts, purchasing agent of Colorado A. & M. College. Later in the morning, William A. Farrell, chief surplus property officer of California State Educational Agency for Surplus

Property, will speak on the federal surplus property program. John A. Pond, treasurer of N.A.E.B., will preside at this session.

The final session of the conference will be held on Friday afternoon and will be devoted to official business of the National Association of Educational Buyers and Educational and Institutional Cooperative Service, Inc. The conference will be concluded with the annual banquet at 7 p.m. with installation of new officers and an address by Dr. Lee A. DuBridge, president of California Institute of Technology, on "New Horizons in Science."

Single beds... or a double bunk—

Make your dormitory space more flexible
with FOSTER #3411-A Convertible Bunks



Head and foot posts combined with spring unit make a single bunk 79" long for extra-tall students



Two head posts combined with two foot posts make sturdy double bunk

Single beds... or double deck—you can solve your dormitory problem best with the Foster Convertible Bunk. Two head posts, two foot posts and two spring units give you the flexibility of two single beds or the compact efficiency and space-saving features of a sturdy double-deck bunk... in minutes! The rugged welded steel end bars serve as convenient ladders for climbing to the upper bunk.

The Foster spring units feature the famous center coil non-sag support that assures perfect posture control... and even your basketball players can stretch out in comfort on the extra-long 79" spring length! For your dorms... your best bed's a Foster!

FOSTER BROS. MFG. CO.

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A reliable source of hospital bedding since 1871

Contract Division and Showrooms—1 Park Avenue, New York, N. Y.

Charges Students Take Courses Easy to Pass

NEW YORK.—More than 1400 representatives of secondary and private schools and academies were participants at the 28th annual conference of the Secondary Education Board held in this city recently. Dr. John F. Gummere, headmaster, William Penn Charter School of Pennsylvania, chairman of the Secondary Education Board, presided at official sessions of the conference.

In his address before the conference delegates, Dr. Gummere charged that "there is a tendency to discriminate against subject-matter courses by providing the so-called 'substitutes,' which count just as much toward graduation but which require little intelligence and less homework to pass." He stated that guidance officers frequently discourage able students who would like to take more work in mathematics or some foreign language by telling them that they will never need those things. This is a common complaint among teachers of those subjects, Dr. Gummere asserted.

Dr. Victor L. Butterfield, president of Wesleyan University, Middletown, Conn., was the luncheon speaker at the final session of the conference and in his address, "The Life of a Teacher," he deplored the tendency to accept as final goals "how to think, how to write, how to speak" without stressing "what is worth thinking, speaking and writing about."

Harold H. Corbin Jr., headmaster of Lake Forest Academy, Lake Forest, Ill., as chairman of the nominating committee presented for consideration the name of Robert Atmore of Choate School as a candidate as representative-

226 SAFE SHOWERS in The University of Oklahoma Boys and Girls New Dormitories Are Regulated by **POWERS MIXERS**



Above: 4 of the 8 Modern Dormitories All Equipped with—

POWERS Double Safe *Thermostatic* WATER MIXERS

*They make showers SAFE against scalding
and sudden shots of cold or hot water caused by*

PRESSURE *and* **TEMPERATURE**
fluctuations in water supply lines.

No Shower is Safe Without this Double Protection— Powers thermostatic water mixers *always* hold the shower temperature constant wherever the bather wants it. They are completely automatic. Failure of cold water instantly shuts off shower. Delivery temperature is *thermostatically* limited to 115° F.

Architects and Engineers
SOREY, HILL AND SOREY

Contractor
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All in Oklahoma City

•
*Just ONE Shower ACCIDENT
may cost many times more
than POWERS mixers.*

•
10 to 20% Water Saving. No need to get out of shower to readjust it because of fluctuating water temperatures . . . when controlled by a Powers Thermostatic Mixer.

(b65)

For Utmost Comfort, Safety and Economy Install Powers Mixers • Write for Bulletin 365

Established in 1891 • **THE POWERS REGULATOR COMPANY** • SKOKIE, ILL. • Offices in Over 50 Cities

NEWS

at-large to succeed Lewis Perry Jr. of Lawrenceville School, Lawrenceville, N.J. Other members of the committee include: chairman, John F. Gummere, headmaster, William Penn Charter School, Philadelphia; recording secretary, Frank S. Somerby, Buckley School, New York City; treasurer, Hart Fessenden, headmaster, Fessenden School, West Newton, Mass.; representative-at-large, Katharine Lee, principal, National Cathedral School for Girls, Washington, D.C.

Summer Workshop Covers Fund Raising Technics

SYRACUSE, N.Y.—A noncredit workshop in fund raising for colleges and universities will be offered by the Syracuse University School of Education at its center in Chautauqua, N.Y., August 9 to 21.

The workshop will cover fund raising technics in the development of college and university resources, including capital gifts campaigns, alumni

funds, bequest programs, and long-term development programs.

For the seventh year, Bernard P. Taylor of Pennsylvania State University will direct the course; he will be assisted by two professional consultants in the fields of publications and fund raising. Presidents, fund directors and alumni secretaries from more than a hundred colleges and universities have taken this course.

Buildings and Grounds Superintendents Hold Convention May 3-5

PASADENA, CALIF.—The 41st annual meeting of the Association of Physical Plant Administrators will be held here May 3 to 5. Sam F. Brewster, superintendent of buildings and grounds at Alabama Polytechnic Institute, is president of the association.

Opening sessions on May 3 will be devoted to official business, following which delegates will visit by means of chartered bus the campuses of the University of Southern California and the University of California at Los Angeles. Luncheon will be served at the University of Southern California and dinner on the University of California campus.

On Tuesday, May 4, sessions will begin with a talk by E. F. Kinzer, director of physical plant, University of Texas Medical Branch, on "Employee Training and Advancement Program." Others on the Tuesday morning program include: Bruce Rule, president of C.I.T. Management Club, and chief engineer, astrophysics and synchrotron projects, on "California Institute of Technology Management Club," and J. R. Jenkins, superintendent of buildings and grounds, Georgia Institute of Technology, on "Retirement, Wage Scale, and Other Benefits for Non-Academic University Employees."

On the afternoon program Prof. Vernon T. Stoutemyer, chairman, department of floriculture, University of California at Los Angeles, will talk on "Recent Progress in Turf Maintenance." Following his presentation, short papers on the following subjects will be presented: "Collection and Disposal of Waste Materials" by K. S. Hayter, director of maintenance and grounds at South Dakota State College; "Gillulated Steam Lines" by Edward E. Kinney, superintendent of buildings and utilities, Michigan State College,



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Wall saver construction.
Available in every combination.

86 patterns in beds and cases to choose from.

76 patterns in seating units for every use.
Designs by Jorgen Hansen and Jens Thuesen.

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HUNTINGTON
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Attach to your letterhead and mail to:
Huntington Chair Corporation, Huntington, W. Va.

Bolta-Wall Installation at Johns Hospital, Austin, Texas, shows handsome Leathergrain Pattern on corridor walls. Bolta-Wall was chosen for use throughout this hospital for its ability to resist stains, scuffs and scratches while retaining its fresh beauty.

**CUTS
MAINTENANCE
COSTS...
LASTS ALMOST
INDEFINITELY**



NEW, VINYL

Bolta-Wall

by the tile and by the yard

Mahogany pattern
(in 8" x 8" tiles and by-the-yard)

Bolta-Wall is remarkably durable and unusually handsome. Ideal for "rough-treatment" areas and for the most luxurious public rooms, Bolta-Wall gives long-lasting beauty to all walls.

Maintenance costs are low because Bolta-Wall needs no repairs, no replacement under normal usage. Bolta-Wall resists fats, oils, grease, alcohol, detergents. Most stains can be wiped away with a damp cloth. It has marked resistance to scuffs and

scratches, is fire-retardant* and dimensionally stable.

The quality and durability are unique at the price. *You can get nothing comparable without paying up to 30% more.* Distinctive Bamboo, Leathergrain and Woodgrain patterns provide years of beautiful wall protection in homes, hospitals, hotels, schools, restaurants, theaters, offices.

Write for more information.



Leathergrain pattern
(by-the-yard only)

Bolta-Wall is a nationally advertised product of BOLTA, Lawrence, Mass., manufacturers of Boltalex vinyl upholstery and pioneers in the manufacture of top quality vinyl products for home, office and institution.

*Tests by New York Testing Laboratories, Inc. indicate conformity with requirements of Paragraph E-3b of Federal Spec. SS-A-118a.

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Please send more information and free samples of Bolta-Wall.

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Address

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NEWS

and "Renovation of Rooms in 50 Year Old Buildings" by C. L. Blacker, superintendent of buildings and grounds at Stanford University. The concluding program item of the afternoon will be a talk on building and maintenance products by Stanley Patterson, superintendent of buildings and grounds at Southern Methodist University. The banquet is scheduled for Tuesday evening.

On Wednesday morning May 5, George O. Weber, business manager of

the University of Maryland, will speak on "Low Cost Dormitories at Maryland for \$2000 per Man." He will be followed by Jack J. Hillery Sr., superintendent of buildings and grounds at the University of California at Los Angeles, speaking on "Buying Plant Supplies and Equipment on Specifications." The concluding talk of the session will be "Factors Affecting Costs of University Building Construction Programs" by Carl M. F. Peterson, superintendent of buildings and power

at the Massachusetts Institute of Technology.

The afternoon program will include addresses by William L. Pereira and Luckman, consulting architects for the California Institute of Technology, on "College Planning Today" and by Irwin I. Wright, superintendent of the department of physical plant, University of Oregon, on the new power plant installation at the University of Oregon. In the late afternoon the delegates will leave on a bus trip to Knott's Berry Farm.

On Thursday and Friday, informal sessions of the conference will include an all-day bus trip on Thursday to Mount Palomar to inspect the 200 inch Hale telescope, largest in the world, owned by the California Institute, and the Mount Wilson observatory, operated jointly by the California Institute and the Carnegie Institute of Washington. On Friday, chartered buses will take conference delegates on an inspection trip to the Douglas aircraft plant at El Segundo where DC-6's and DC-7's are manufactured.

Wesley Hertenstein, superintendent of buildings and grounds at California Institute and vice president of the association, is chairman of the host committee. Other members are Anthony D. Lazzaro, University of Southern California, and L. H. Sweeney, University of California at Los Angeles.



40% OFF!

No matter how it is dispensed, the ability of a paper towel to dry the hands is the most important thing about a towel service. That's why Mosinee TURN-TOWL service tops anything in its field. There is not another controlled-type cabinet on the market, dispensing towels that can match the quality of Mosinee Turn-Towls.

And as for reducing towel consumption — read this, "A mid-western college with 800 students switched from low-cost ordinary towels to Turn-Towls. The maintenance engineer claims they are now using 40% fewer towels."

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PREP-TOWLS • ZIP-TOWLS • TRIM-TOWLS • TURN-TOWLS • ROLTOWLS • BATH-TOWLS

377,000 Korean Veterans Train Under G.I. Bill

WASHINGTON, D.C. — One out of six post-Korean veterans in America today has trained at some time or other under the 18 month old Korean G.I. bill, a Veterans Administration survey disclosed.

The 377,000 Korean G.I. bill trainees enrolled for courses ranging from accelerated grade school work to post-graduate college study. More than half of the trainees, or nearly 192,000, attended colleges and universities.

Another 30 per cent, or about 117,000, enrolled in schools below the college level. Trade and vocational courses were the most popular types of below-college schooling, accounting for nearly 69,000 veterans. More than 23,000 enrolled in grade schools and high schools; 19,000 selected business schools, and 5700 took their training in correspondence schools.

Veterans who trained on the job

SHE'S SAFE...



She's uncertain



FULLY CLOSED RISER BOARDS MAKE WAYNE GYMSTANDS SAFE ALL-WAYS!

How many times have you hesitated cautiously and with concern when leaving the stands after a game? You could see the maze of understructure and look at the floor below. You were relatively safe, of course, but you didn't *feel* safe, and that's important!

Wayne Gymstands use "riser" boards that completely close the vertical gap between the foot and seatboards. They help the spectator to feel safe and secure. His feet can't slip because there's no place for them to go! And he doesn't *think* of falling

because he doesn't see the understructure or floor directly beneath him.

The fully closed riser board is an *important* Wayne Gymstand feature. Like other Wayne construction features, it puts a premium on spectator safety. And, it's another good indication that *Wayne builds gymstands better.*

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NEWS

under the Korean G.I. bill numbered nearly 56,000. Nearly two-thirds of these were in apprenticeship programs. The rest were taking other forms of job training.

New applications for training from post-Korean veterans are coming into V.A. regional offices at the rate of 35,000 a month, V.A. said.

The nation's population of veterans with service since the outbreak of Korean fighting now stands at nearly 2,500,000.

Self-Survey Under Way at University of Minnesota

MINNEAPOLIS.—As the first step in a long-range planning program for the University of Minnesota, President J. L. Morrill recently sent a comprehensive "self-survey" questionnaire to more than 200 university departments.

Information compiled from replies will be used, according to President Morrill, to prepare a documented budget program for the improvement

of university operations and services during the 1955-57 biennium, and for a university development program for the next decade, and also to outline the major enrollment growth problems that face the institution.

In a letter accompanying the questionnaire, President Morrill explained that the university is taking stock between two periods of rapid development. The school is catching its breath after the great wave of World War II students and is now making preparations for the expected permanent increased enrollment.

Long-range goals are explored in the questionnaire, which calls upon department heads to discuss new activities or services; improvement of existing activities; expansion and curtailment of staff; changes in the interrelationships of public service; changing relationships with outside agencies and among the various university campuses.

The study is expected to help the university bring before the legislature a clear picture of the program of instruction, research and public service with which the staff proposes to meet developing needs of the state.

Survey Discloses Students Lack Certain Freedoms

CHICAGO.—Students, not professors, have reason to complain about the lack of academic freedom, according to Dr. Willard A. Kerr, associate professor of psychology at Illinois Institute of Technology, following a preliminary analysis of replies received in an "academic freedom" survey conducted in 1953 among some fifty Illinois institutions of higher learning.

The survey, still in progress, is being conducted by the academic freedom committee of the Illinois division of the American Civil Liberties Union. Dr. Kerr is a member of the committee.

Most institutions surveyed were found to maintain an "admirable situation" with respect to most of the freedoms studied. Dr. Kerr indicated the survey results may be most useful to show individual institutions where remedial attention is needed.

Elaborating on the point that serious deficiencies exist, especially for students, Dr. Kerr said survey results showed their least secure freedoms are "to hear outside speakers, to criticize the faculty and administration, to organize associations and affiliate na-



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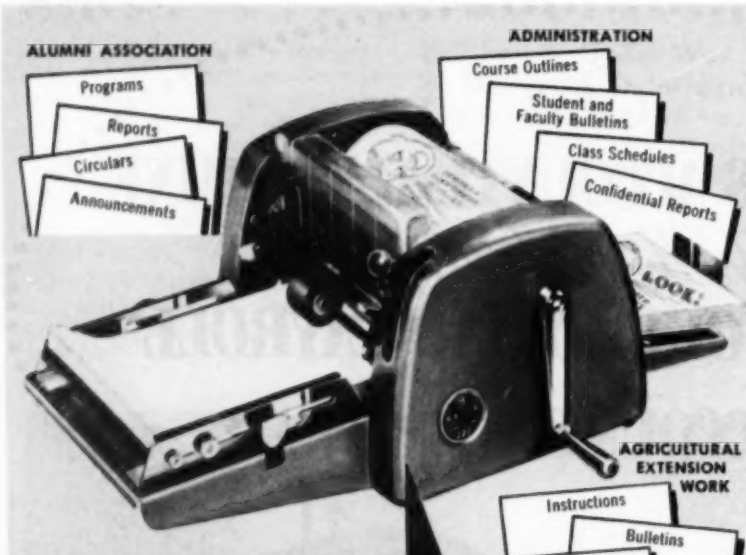
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CTI-454

NEWS

tionally, to conduct a free press, to petition, and to enjoy a reasonable off-campus activity."

Freedom of choice of faculty advisers was found to be students' most entrenched freedom.

Survey results disclosed that faculty members' greatest freedoms are freedom from special requirements (oaths), of association in faculty organizations, of citizenship activities, and of research.

The faculty's least secure freedoms relate to faculty self-government, to tenure (security), and freedom to criticize curriculum and administration, the survey showed.

The A.C.L.U. committee conducted the survey in an attempt to measure academic freedom for each of the Illinois educational institutions. A two-page "test" of academic freedom was constructed with the help of members of the A.C.L.U. group and the A.C.L.U. booklet, "Academic Freedom and Academic Responsibility." It contains 12 items on rights of students, seven on rights of teachers, and four general rights. Each item was answered on a three-point scale of "complete" freedom, "as a general rule" there is freedom, and "very little or no" freedom.

Approximately 200 of the questionnaires were mailed to Illinois colleges addressed to: (1) one administrator, usually the president; (2) one or more professors, and (3) one or more student leaders, usually the newspaper editor or student council president.

Students to Assume Some of Maids' Duties in Fall

CAMBRIDGE, MASS.—Harvard College will join other institutions in the eastern area in reducing certain features of room service available to residence hall students. Announcement in regard to such a change was made by Edward Reynolds, administrative vice president, who stated that the following schedule would be observed:

1. Effective September 1954, dormitory bedmaking by maids will be eliminated. Concurrently, there will be a proportionate rescheduling of maids' duties to cover the rest of the cleaning service.

2. At the same time and in some dormitory units, there will begin a gradual changeover from five day per week maid service to once per week heavy-duty cleaning. This work will be done

COLLEGE and UNIVERSITY BUSINESS

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1. Permanent Pre-Lubrication—Pageants are built to last longer—without maintenance—than any other projector. How? They are permanently lubricated at the factory to eliminate the chief cause of projector breakdowns—over- or under-oiling.

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for crisp, clear sound from both originals and "dupes."

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by men using heavy mechanical and working equipment and will require fewer workers.

3. This gradual schedule of change-over generally will be determined by the retirement and resignation rate of the over-all maid staff of the university; employment for the vast majority of present maids will be maintained. To accomplish this, Harvard University "is postponing realization of a substantial part of the desired economies and temporarily will carry a deficit

from the operation of the college dormitories."

4. However, approximately 50 maids, each of whom will have had less than one year's service on February 1, will be informed that they will not be called back for the opening of the fall term.

5. The present janitorial staff will not be directly affected by the change-over.

6. Teams of student porters already on the residence hall pay roll will try

out new mechanized cleaning procedures in the rooms starting this spring. It will be some time before final cleaning schedules or staff needs are determined.

7. For the present the graduate school dormitories, with the possible exception of Vanderbilt Hall at the medical school, are not being included in the changeover plan.

8. Those short-term maids being released in June will be given special assistance by the personnel office in finding other employment either at Harvard or in the community if they wish it. Priority will be given to them in referrals to other Harvard jobs. The cooperation of Cambridge and other Greater Boston employers, including hospitals, banks, insurance companies, and other colleges, will be solicited, and references and credentials will be made available to them. Arthur P. McLellan, manager of the Cambridge branch of the state employment service, also has promised the full cooperation of his office in placing those released.

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Gifts and Bequests to Higher Education in 1952-53 at High Level

NEW YORK.—Although decreasing somewhat from the record high of the previous year, private philanthropy for higher education maintained a high level in 1952-53.

According to a study of gifts and bequests to 50 major colleges and universities, published recently by John Price Jones Company, Inc., gifts totaled \$88,052,000 in 1952-53. This was the second largest amount reported in any single year since the inception of the study, but there was a decrease of 3.3 per cent from 1951-52, the all-time high year.

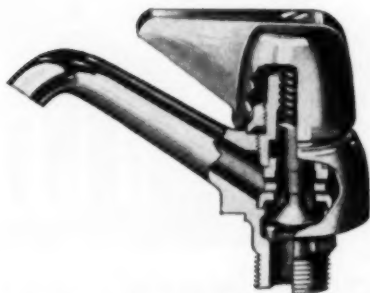
The same institutions received bequests totaling \$28,157,000 in 1952-53, a decrease of 8.2 per cent from the previous year.

The total of gifts and bequests was \$116,209,000, a decrease of \$5,520,000, or 4.5 per cent, from the previous high year of 1951-52.

In 1952-53, eight institutions received contributions in excess of \$5,000,000. These sums totaled \$60,822,000, or 52.3 per cent of the total giving to the 50 institutions in that year.

The five leading beneficiaries in 1952-53 were Harvard, \$12,442,000;

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Bigger enrollments call for bigger schools. Fortunately, today's new buildings do more than just add needed space. They add efficiency, too . . . because they are far better planned than the older buildings they replace or augment.

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placed near study rooms, assembly or lecture halls, cafeterias, play exits.

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NEWS

New York University, \$9,172,000; Yale, \$8,981,000; Cornell, \$6,206,000, and Columbia, \$6,164,000. Smith and Goucher were leaders among the eight women's colleges in the study. Smith received \$885,000 and Goucher \$881,000.

Publishes Commentaries on Court Decisions

ST. LOUIS.—Washington University has announced publication of the fourth in a series of annual commentaries on recent court decisions of interest to college and university administrators. It is "Current Legal Problems of Colleges and Universities" by Dr. Thomas E. Blackwell, vice chancellor and treasurer of Washington University.

Dr. Blackwell has been a member of the Central Association of College and University Business Officers since 1924 and served as its president in 1947-48. He serves as a member of the editorial advisory board of COLLEGE AND UNIVERSITY BUSINESS, which has published his monthly discussion of legal problems for four or five years. He is now serving as an editor of a two-volume text, "College and University Administration." The first volume was published in November 1952 by the American Council on Education.

Must Reduce Operating Expenses 13-15 Per Cent

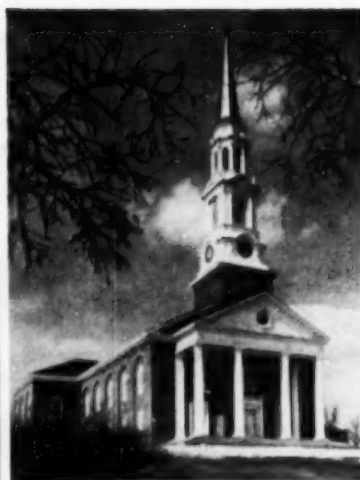
PHILADELPHIA.—Announcement of next year's budget by the University of Pennsylvania revealed that it plans to cut operating expenses from 13 to 15 per cent in the next fiscal year to overcome an increasing deficit.

The budget for teaching and general accounts totals approximately \$13,000,000 and now faces an anticipated deficit of about \$950,000, President Gaylor P. Harnwell said.

Some items cannot be reduced, such as debt service, insurance and annuities, so that the major reductions will have to be made in the costs of house-keeping and education.

Temple University to Build Hospital

PHILADELPHIA. — Temple University recently announced plans for construction of a \$10 million 10 story air conditioned hospital. It will be flanked by an eight-story clinic for patients not requiring bed service.



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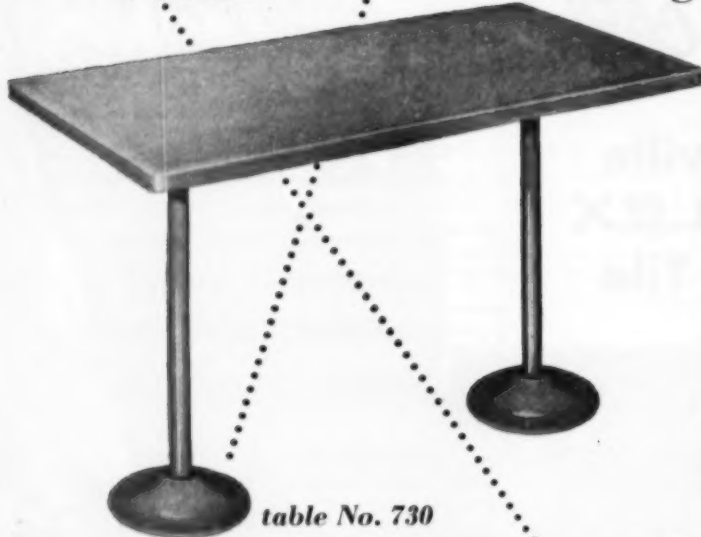


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NEWS

Urges Restoration of \$6 Million Cut in Exchange Program

MINNEAPOLIS. — James L. Morrill, president of the University of Minnesota and chairman of the United States Advisory Commission on Educational Exchange, made a plea recently for restoration by the Senate of a \$6 million House of Representatives slash in President Eisenhower's \$15 million 1955 budget request for the State Department's international education exchange program.

President Morrill directed his appeal through Sen. Edward J. Thye (R-Minn.), pointing out that the cut will force a 40 per cent reduction from the current operating level of the exchange program. Dr. Morrill pointed out that "if the Senate sustains the reduction voted by the House, our educational exchange effort will shrivel from an effective worldwide program involving 70 countries to a restricted operation—on a sharply reduced scale—in only 21 countries. We will have no educational exchange program with the other American republics and none with 26 countries in other parts of the free world." Dr. Morrill went on to say further that "our educational exchange program has been making friends abroad for us for the last 15 years. Many of these friends are persons who are or who will become influential in making national policy and in affecting public opinion in their countries, including educators, editors and reporters, legislators and labor leaders."

President Morrill contended that the cost of making these influential friends for the United States throughout the world is comparatively low. The educational exchange budget for 70 countries amounts to \$14,965,000 for this year, he explained. President Eisenhower has asked \$15,000,000 to provide in 1955 for 4513 exchanges involving key people from those 70 countries and carefully selected Americans to demonstrate American aims and achievements to their hosts abroad, Dr. Morrill reported.

These funds are drawn from two major sources. About half are foreign currencies available under the Fulbright Act as a result of surplus property sales in 21 foreign countries. The other half are dollar appropriations available under authorization of the Smith-Mundt Act.



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Photograph shows Director Installation in the offices of the Credit Representative of the First National Bank of Boston, Empire State Building, New York.

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NEWS

Higher Education Concerned With Flood of Students, Intellectual Freedom, Self-Evaluation

CHICAGO.—Three relatively new problems drew sharpest scrutiny from the 850 college folk who attended the ninth National Conference on Higher Education here March 4 to 6. These three were:

1. How to teach, house and finance the impending flood of four million expected on American campuses by 1970.

2. How to "restore" intellectual freedom to our colleges.

3. How to conduct an effective "institutional self-evaluation."

Significant, too, was the promise of new light on a traditional problem, that of drop-outs. Delegates from the 420 institutions represented at the sessions were treated to a sneak preview of a student mortality survey be-

ing conducted jointly by the Office of Education and the American Association of Collegiate Registrars and Admissions Officers. The 2600 questionnaires returned seem to call for changes in admissions policies and teaching practices, among other reforms.

Ambassador Charles Malik of Lebanon was the dinner speaker on the opening night. A message from President Eisenhower was read at the first general session and one from Adlai E. Stevenson at the second general session.

Chancellor Edward K. Graham of the Woman's College of the University of North Carolina, president of the association, presided at most of the sessions, although Dean M. Eunice Hilton of the Syracuse University College of Home Economics held the gavel on one occasion in her rôle as vice president. She is the nominee for the 1954 presidency, the election to be by mail ballot in April.

The flood tide of students sweeping through the grade schools has college administrators worried. Registrar Ronald B. Thompson of Ohio State University gave one suggestion:


"As the man who could learn that the stove was hot by watching someone else burn his fingers, perhaps we in higher education can learn by watching intelligently the development and solution of the problem at the elementary and high school levels.


"A major decision that must be made reasonably soon is whether to limit educational opportunity for all to the first two years beyond the secondary school, selecting only the ablest to go beyond certain levels in higher education, just as we now have limitations in the various professional schools.

"In the history of the secondary school we have seen support shift from private to public. Is this shift to continue through higher education? We must also decide whether to expand present facilities or to establish new centers of learning, perhaps in the light of population shifts."


James A. Van Zwoll, professor of educational administration at the University of Maryland, declared that studies must precede extensive plant expansion. Perhaps the 13th and 14th years can be tacked onto the secondary schools; certainly wider use can be made of existing plant facilities. "Student housing may well be the only

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Illustrated is the 60 gallon Model 6529 with Model 6528 rubber bumper and Model 6526 wringer.

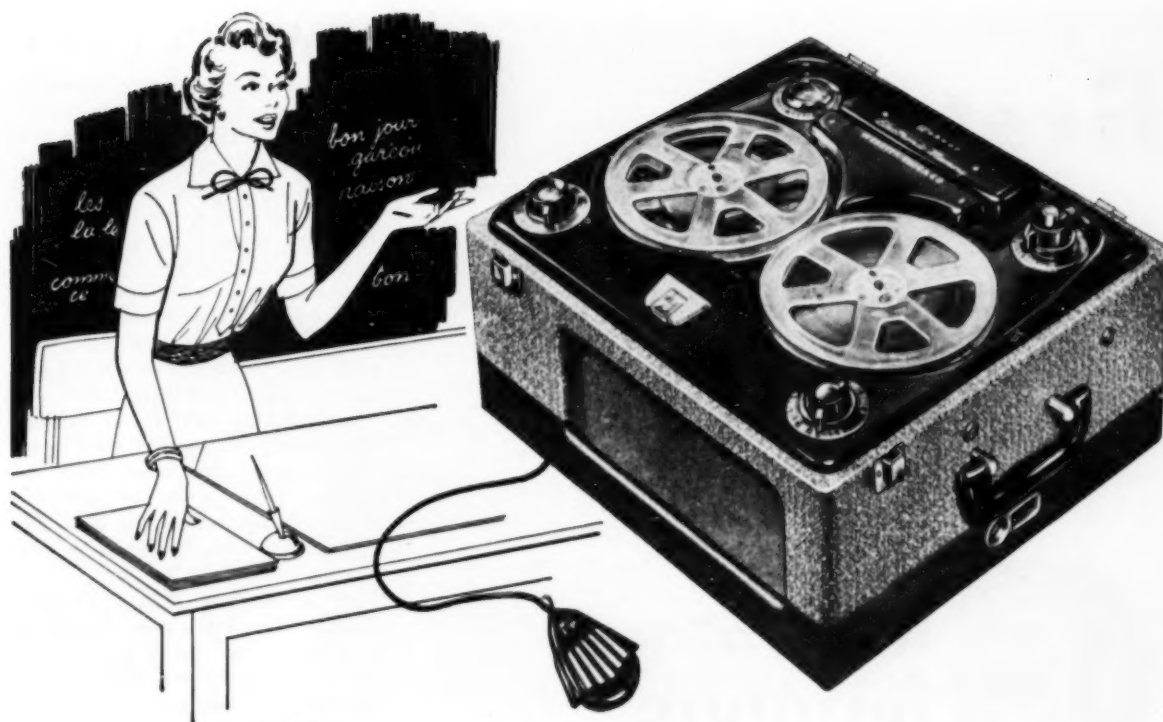
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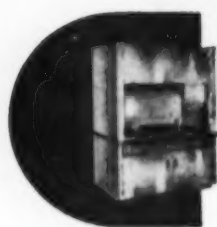
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NEWS

area in which considerable expansion can take place defensibly without waiting for the completion of intensive studies of plant usage," he concluded.

To Algo D. Henderson, professor of higher education at the University of Michigan, the situation does not seem so desperate. He suggested that public community colleges, which now enroll 10 per cent of college students, could be further developed to care for 25 per cent. That would absorb 600,000 students. Another 400,000 students can conceivably be cared for in existing institutions, since present enrollments have dropped that much from the postwar peak. True, he admitted, much of the war surplus plant has deteriorated seriously, but some new plant facilities have been built.

"If as many as a million additional students were taken care of in these two ways, the remaining problem would not be so serious," Prof. Henderson asserted. "Both public and private colleges and universities could share in making the necessary expansion."

The precarious state of freedom in American education was the subject of an excited group conference on Friday evening. President Royce C. Pitkin of Goddard College, analyst of the discussion group, declared that "education could do with a few Elmer Davises."

"The situation is alarming," President Pitkin said. "We educators should make some small move toward acting like free men. I say small move because I think that faculties that have already been intimidated are unlikely to act boldly. Courage and confidence come from joining with others in a great cause. We ought to reward the expression of differences. We ought to encourage discussion and study of the nature of freedom and reread what the founding fathers had to say about the importance and price of liberty. We who believe in the democratic way of life and the continuation of a society of free men ought to hearken to the voice of our consciences and act like free men."

Strong warnings came also from Dean Ernest O. Melby of the New York University School of Education.

"We have allowed ourselves to be cowed into a kind of subservient neutralism," Dean Melby declared. "In many of our groups there is a frantic quest for political and economic orthodoxy. We are avoiding controversial



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The installation at Montana State University's attractive Music Building, for instance, is one of several

Acousti-treatments made on the campus. Under the supervision and close cooperation of Prof. Knudsen, these recommendations were carried out: For classrooms . . . good-looking, easily-maintained Acousti-Celotex Random Pattern® Cane Fiber Tile. For corridors . . . decorative Celotone® on Acousti-Line Suspension System. For practice rooms, secondary corridors . . . Celotex Perforated Panel Board on the walls, backed up with Celotex Rock Wool Sound Absorbing Blankets.

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issues—we want to be on the winning side. The group mind is taking over."

Dean Melby had a suggestion: Education must get off the college campus and into the community. "Books, lectures and examinations have meaning as they are related to experience," the N.Y.U. dean asserted. "After community experience our students will find excitement in the great books and will be critical listeners in the lecture room. The professor who has wrestled with a community problem surrounded by

his students will be a more vital teacher. Communities that work with their colleges, that receive valuable services and leadership from them, will support higher education be it public or private.

"Today's all-important educational problem is how to make education not only a defense for freedom but a powerful engine for giving freedom a new dynamic. The college of the future will give freedom this dynamic by breaking down walls that separate

the colleges from their communities."

Surveys of the major areas of institutional operation came in for considerable discussion at the conference. Chancellor John Dale Russell of the board of educational finance of New Mexico talked on institutional surveys made by outside professional agencies and C. Robert Pace of Syracuse University on the newer practice of self-evaluation.

To date the self-evaluations have been relatively unsophisticated, Prof. Pace declared, and new and broader concepts need to be developed by the universities.

The national conference passed resolutions calling for lower interest rates, reduced reserve fund requirements, and additional loans from the federal government in college housing; for an amendment to the internal revenue code that will provide income tax relief for college students, their parents and guardians; for implementation of last year's resolution in regard to adult education, and for a reaffirmation of previous resolutions in regard to intellectual freedom.

Building Needs Acute at N.Y. State University

ALBANY, N.Y.—The State University of New York reports an acute building problem despite the fact that a \$91,000,000 construction program has been continued over the last five years.

The annual report reveals a shortage of dormitory facilities at the university's 11 teachers colleges.

Founded five years ago, the university consists of 37 scattered units, including 21 colleges, six technical institutes, 10 community colleges, locally operated, and two medical centers. It has a total of 21,000 students.

Pratt Plans Expansion

NEW YORK.—Dr. Francis Horn, president of Pratt Institute, Brooklyn, announced recently that the institution will launch a campaign for \$1,750,000 to improve its campus facilities, including the construction of two residence halls, a classroom building, and a college union building. Other objectives include increasing the institute's resources for handling larger enrollments, establishment of a school of architecture, and introduction of several new courses.



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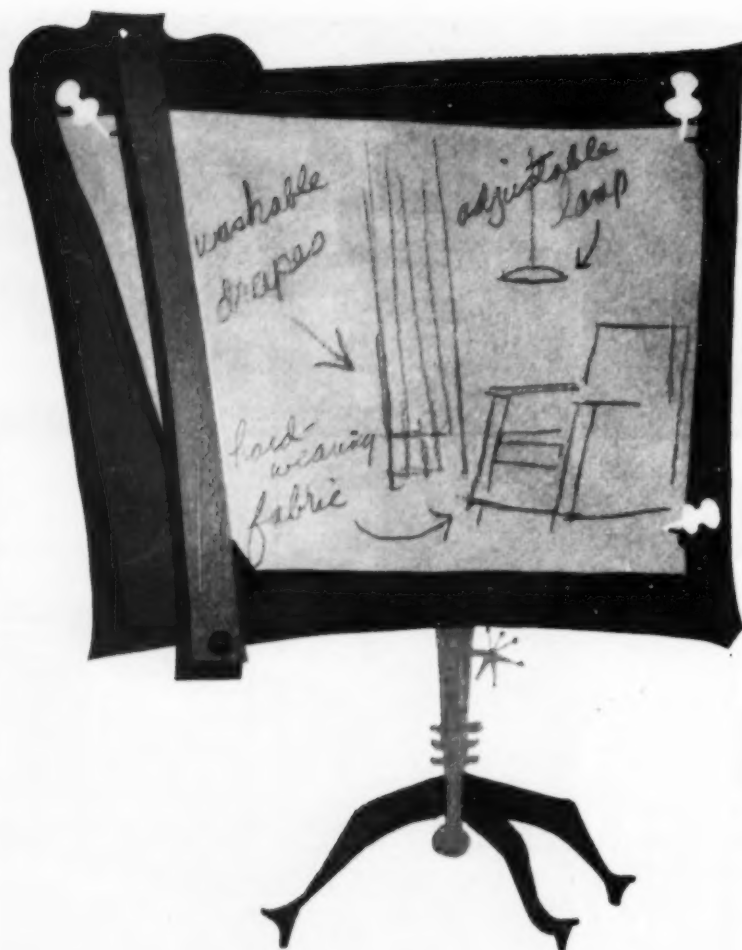


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NAMES IN THE NEWS

Dr. A. Leland Forrest, dean of the college at Nebraska Wesleyan University, Lincoln, has been named chancellor of the institution to succeed Dr.



A. Leland Forrest

Carl C. Bracy, who resigned recently to accept the presidency of Mount Union College, Alliance, Ohio.

V. Howard Belcher, business manager, Lynchburg College, Lynchburg, Va., recently has accepted a similar position at Meredith College, Raleigh, N.C.

Edwin J. Zobel Jr. is the new business manager of Wesleyan College, Macon, Ga.

Carl C. Bolton, formerly associate director of admissions at the University of Southern California, has been named as administrative assistant to the president, **Fred D. Fagg Jr.** **John K. Steinbaugh**, principal of Torrance High School in Los Angeles County, California, succeeds Mr. Bolton.



Clarence C. Klein

Clarence C. Klein, administrator of the Housing Authority of the City of Pittsburgh, has been chosen president of Adrian College, Adrian, Mich. His

appointment will become effective September 1, when he will succeed **Dr. E. H. Babbitt**, acting president since last July.

William J. Griffith, a former field secretary of Duke University's admissions office, has recently been named director of the new student union at Duke University. Mr. Griffith is an alumnus of the university, class of 1950.



William J. Griffith

Howard N. Smith, controller of Harvard University for the last 12 years, has submitted his resignation to take place August 31. **L. Gard Wiggins** of Morristown, N.J., will succeed Mr. Smith beginning September 1; until that date he will serve as acting controller. Mr. Smith has been granted a leave of absence for the intervening



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NAMES

months. Mr. Wiggins, who has been treasurer and secretary of Chilcott Laboratories Inc. since 1947, will direct accounting control over the operations of the university.

Merrill Ewing, for the last seven years assistant business manager of Simpson College, Indianola, Iowa, has been appointed controller of the American University, Washington, D.C. He will have charge of bursar and ac-



Merrill Ewing



Edward J. Mack

counting functions at the institution. Edward J. Mack, associated with the Bureau of Social Science Research at American University since 1950, has been named physical plant manager of the university. In his capacity, he will have charge of all university purchasing as well as plant management and university grounds.



Bertram G. Knowles

Bertram G. Knowles, for the last two years director of students at Long Island University, Brooklyn, N.Y., has been named assistant to the president, Adm. Richard L. Conolly. The office of director of students is being abolished, and the office of assistant to the president is being reestablished.

Four promotions on the business staff of the University of Rochester, Rochester, N.Y., have been announced in the university's administrative reorganization program to coordinate and centralize the business, education and research functions of its six schools and colleges. Three new positions have been created in connection with the appointments: director of budgets, associate controller, and associate business manager. Ruth A. Hemenway, assistant treasurer of the university since 1932, has been named director of the budgets and assistant treasurer. Richard J. Crego, university bursar for the last three years, has been promoted to associate controller. Kurt M. Hertzfeld, assistant to the treasurer since 1949, has become associate business manager. David D.

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NAMES

Ogden, assistant to the treasurer for the last two years, has been promoted to assistant treasurer.

Jack W. Adwers, superintendent of buildings and grounds at the University of Omaha, has submitted his resignation in order to accept appointment to a similar position at the University of Texas Dental Branch, Houston. His



Jack W. Adwers



Alden F. Aust

resignation becomes effective July 1. He has been a member of the University of Omaha's staff since 1937. Alden F. Aust, superintendent of buildings and grounds at Beloit College, Beloit, Wis., has been appointed to succeed Mr. Adwers. Mr. Aust was in charge of public housing and city planning in St. Paul prior to accepting his present position at Beloit College.

DIRECTORY OF ASSOCIATIONS

National Federation of College and University Business Officer Associations

President: Irwin K. French, Wellesley College; vice president: Gerald D. Henderson, Vanderbilt University; secretary-treasurer: Nelson A. Wahlstrom, University of Washington.

Association of College and University Business Officers

American Association

President: J. B. Cephas, Virginia State College; secretary: L. H. Foster Jr., Tuskegee Institute.

Convention: May 2-4, Lincoln University, Jefferson City, Mo.

Central Association

President: Jacob Taylor, Ohio State University; secretary-treasurer: T. N. McClure, Knox College.

Convention: April 25-27, Oklahoma A.&M. College, Stillwater.

Eastern Association

President: John W. S. Littlefield, Colgate University; secretary-treasurer: Irwin K. French, Wellesley College.

Convention: Dec. 5-7, Shoreham Hotel, Washington, D.C.

Southern Association

President: J. H. Dawberry, University System of Georgia; secretary-treasurer: Gerald D. Henderson, Vanderbilt University.

Convention: April 28-May 1, Raleigh, N.C.

Western Association

President: George W. Green, California Institute of Technology; secretary: Duncan McFadden, Stanford University.

Convention: May 9-11, Rickey's Studio Inn, Palo Alto, Calif.

Association of Physical Plant Administrators of Universities and Colleges

President: Sam Brewster, Alabama Polytechnic Institute; secretary-treasurer: A. F. Gallistel, University of Wisconsin.

Convention: May 3-5, California Institute of Technology, Pasadena.

Association of College Unions

President: Louis Day Jr., University of Pennsylvania; secretary-treasurer: Edgar A. Whiting, Cornell University; editor of publication: Porter Butts, University of Wisconsin.

Convention: April 25-28, Edgewater Beach Hotel, Chicago.

National Association of Educational Buyers

President: Forrest Abbott, Barnard College; executive secretary: Bert C. Ahrens, 1461 Franklin Ave., Garden City, N.Y.

Convention: May 5-7, Huntington Hotel, Pasadena, Calif.

American College Public Relations Association

President: Mrs. Veta Lee Smith, Marshall College, Huntington, W.Va.; executive secretary: Marvin W. Topping, 726 Jackson Place, N.W., Washington 6, D.C.

Convention: June 21-24, Hotel Roosevelt, New York City.

National Association of College Stores

President: R. C. Avery, Cornell Campus Store, Ithaca, N.Y.; executive secretary: Russell Reynolds, Box 58, 33 West College Street, Oberlin, Ohio.

Convention: April 20-23, Sherman Hotel, Chicago.

College and University Personnel Association

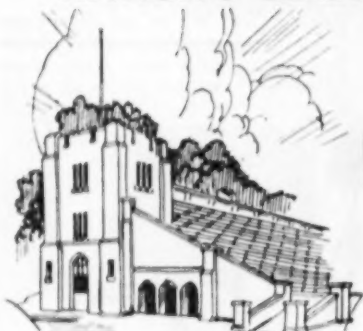
President: Max W. Seppanfield, University of Indiana Medical Center, Indianapolis; secretary-treasurer: Clara Stimson, University of Rochester; executive secretary: Donald E. Dickason, University of Illinois. Permanent headquarters, 809 S. Wright St., Champaign, Ill.

Convention: Aug. 15-18, International House, University of California, Berkeley.

National Association of College and University Housing Officers

President: J. C. Schilleter, Iowa State College; vice president: M. R. Shaw, Cornell University; secretary-treasurer: Ruth N. Donnelly, University of California, Berkeley.

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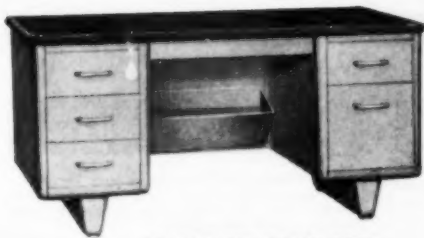
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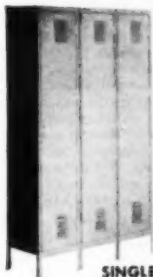
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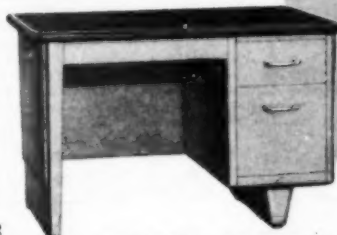
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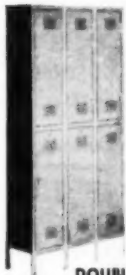
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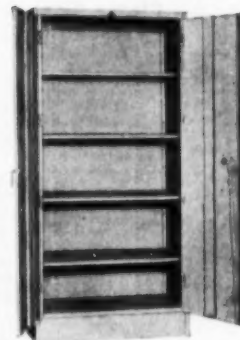


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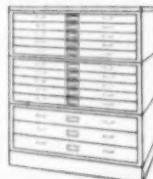
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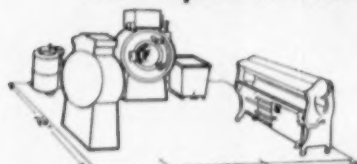


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Buildings and Grounds—Broad experience and mature judgment with engineering background, presently employed, interested in responsible position. Write Box CW 194, COLLEGE AND UNIVERSITY BUSINESS.

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Business Manager - Comptroller - Auditor—Age 47; 28 years' varied accounting experience, including university, desires permanent connection with Christian college or university in the Southeast, East, or South. Write Box CW 195, COLLEGE AND UNIVERSITY BUSINESS.

Food Director—Administrative Dietitian—Twenty three years experience, purchasing, menus, personnel; desires to relocate; reliable, honest; references: age 49; female. Write Box CW 199, COLLEGE AND UNIVERSITY BUSINESS.

Food Service Director—Position wanted in large university; eight years as food director, enrollment of two thousand and three hundred boarding students; at present four years as food manager serving five thousand meals a day, working under the federal ration system feeding at a low cost; prefer college work; commissary steward four years; graduate of Cooks and Bakers School, two years; B.A.; age 36; dependable and honest; can furnish good recommendations. Write Box CW 198, COLLEGE AND UNIVERSITY BUSINESS.

Treasurer—Business Manager—College graduate; New England background; major Banking-Economics with successful business career which includes 16 years lending national investment dealer formulating investment policies for corporations and individuals; prefers association with college or preparatory school in financial capacity; fully experienced investments, credits, bookkeeping, personnel, office routine; athletic interest, particularly youth programs; 48 years; excellent health; energetic; good appearance; 6', 180 lbs.; business and banking references. Write Box CW 201, COLLEGE AND UNIVERSITY BUSINESS.

POSITIONS OPEN

College Union and Men's Dormitory Director—Both units small; college not far from Pittsburgh. Write Box CO 141, COLLEGE AND UNIVERSITY BUSINESS.

Food Service Manager—Excellent opportunity for experienced man or woman capable of managing the entire operations of snack bar, cafeteria and catering service in new university student union; estimated annual gross volume of \$400,000; in community of 25,000 at foot of Rocky Mountains; offers ideal climate and vacationland living; position available near June 1st; salary commensurate with background. Write: M. S. Hendrickson, Personnel Director, UNIVERSITY OF COLORADO, Boulder, Colorado.

The rates for classified advertisements are: 20 cents a word; minimum charge, \$1. (No charge for "key" number.) Forms close 25th of month preceding date of issue.

Address replicas to
COLLEGE AND UNIVERSITY BUSINESS
919 N. Michigan Avenue, Chicago 11, Ill.

Checker
HAT AND
COAT RACKS



No. 25 portable
5 ft. against-wall
rack holds 25
coats and hats



No. 50
This 5 ft. portable
rack holds 50 coats
and hats

**CHECKROOM EFFICIENCY
ANYWHERE**

Keep coats and hats out in the open, aired, dry and in press—each coat on a wooden hanger held spaced apart from every other; each hat in its individualized space on a ventilated shelf. Save floor space—accommodate 5 people per square foot. Rigidly built for lifetime service—welded heavy gauge and square tubular furniture steel. Beautifully finished baked-on enamel. Portable units come on large swivel casters. Checker Wall Racks are also available in any length by the foot—fit in anywhere. Mount on wall at any height—standard equipment in modern schools, etc. where they keep clothes in a safe, sanitary, orderly manner.

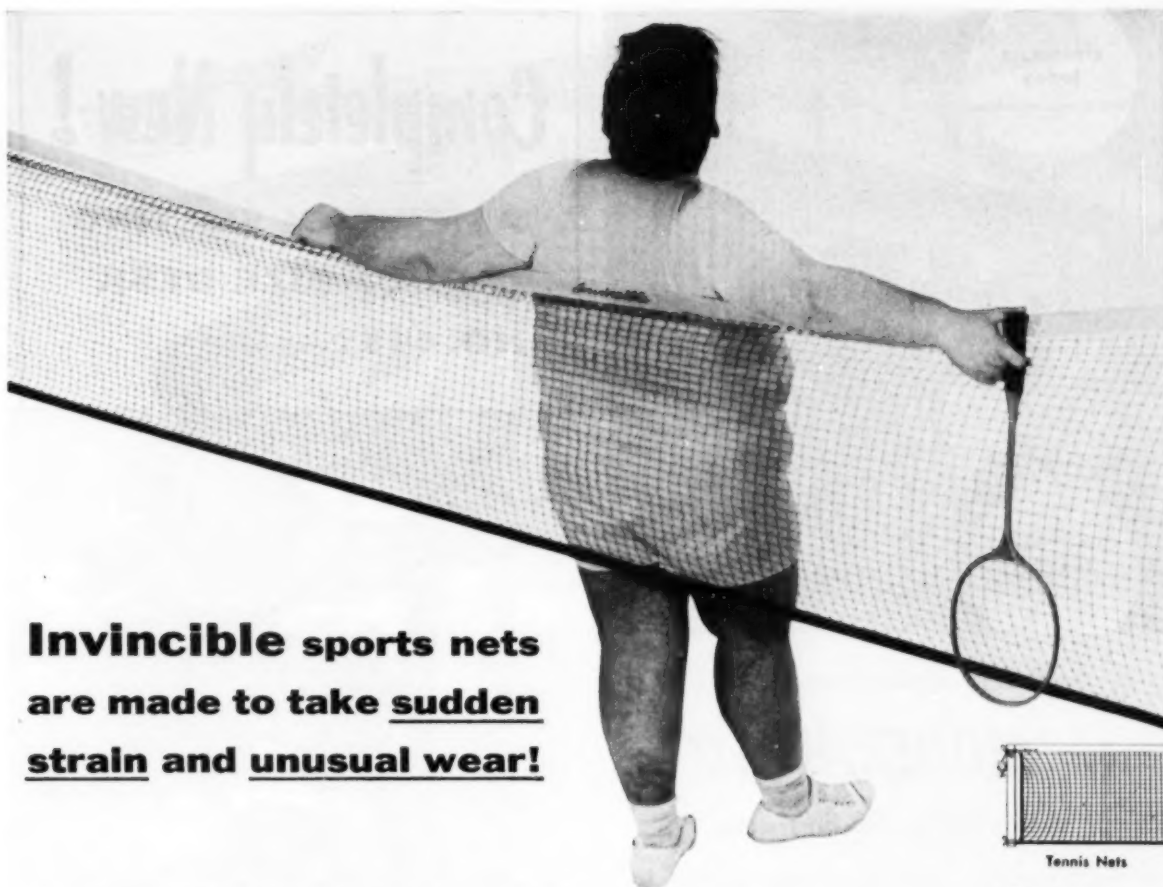
Write for Bulletin

VOGEL-PETERSON CO.

"The Checkroom People"

1121 WEST 37TH STREET, CHICAGO 9, U.S.A.

COLLEGE and UNIVERSITY BUSINESS



**Invincible sports nets
are made to take sudden
strain and unusual wear!**

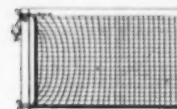
As you know, school sports nets receive all kinds of rugged, unusual treatment. That's why they must be made to take sudden strain without wearing out prematurely.

Ederer Invincible Nets are created with this purpose in mind.

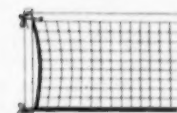
For one thing, Invincible nets have double strength in areas where stress is greatest. For another, Ederer sees that every net has 100% uniform mesh . . . with each thread selected from the finest

quality, rot-resistant fibres.

And before even one Invincible net reaches your hands, it passes Ederer's famous DOUBLE inspection. Ederer makes nets for every sport. And whether you prefer cotton, linen or nylon, orders for special sizes and shapes are always welcome. You'll find Invincible nets competitively priced and available everywhere in the United States. For the name of your nearest Invincible dealer, write Ederer Division, Chicago 10, Ill.



Tennis Nets



Volley Ball Nets



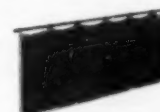
Movable Baseball Backstops



Baseball Batting Cages



Field Hockey Goal Nets



Gymnasium Dividing Nets

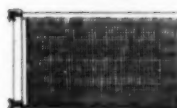


EDERER Division

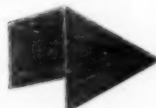
THE LINEN THREAD COMPANY INC.

540 North Orleans Street, Chicago 10, Illinois

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Badminton Nets



Lacrosse Goal Nets



Ice Hockey Goal Nets

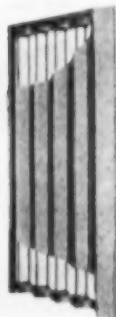


Soccer Goal Nets



Use Space Better
With **"MODERNFOLD"**
—the better folding door

Folding "Modernfold" walls—that change the shape of space in seconds—make this room serve equally for classrooms or as a recreation area. "Modernfold"—the better folding door assures you this versatility for years to come! It's made to last longer, give more years of trouble-free service than any other folding door on today's market.



"Modernfold" is available in sizes to fit any opening, or solve any room division problem. Covering is finest obtainable vinyl fabric—needs no paint, washes with soap and water.

Consult your "Modernfold" distributor (listed under "doors" in your city classified directory) today. Or mail coupon.

Only "Modernfold" has opposing double hinges both top and bottom. "Modernfold" folds evenly, along its center line instead of zig-zagging from side to side. This prevents warp and twist—means greater strength, longer life, better appearance.



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NEW CASTLE, INDIANA
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NEW CASTLE PRODUCTS, INC.
P. O. Box 801
New Castle, Indiana

Please send full details on "Modernfold" doors.

Name

Address

City

County

State

Completely New!

**AMERICAN SEATING
ADULT-SIZE DESK
NO. 445...**



**Modern Styling • Greatest Student Comfort
Steel Pylon Construction**

Developed through extensive research for use in classrooms where adult-size, movable furniture is required. Many new features embody suggestions of educators, architects, leading designers.

New cradleform seat, for comfortable, dynamic posture, rotates on durable, silent, nylon bearings—allowing ingress and egress in one natural motion. Generous, adult roominess for knee, leg and body comfort. Adequate and sloped working surface. Visible, handy book-storage space.



American Bodiform Auditorium Chairs
Full-upholstered—the ultimate in beauty, comfort, durability, acoustical benefit. Available with or without folding tablet-arm.

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World's Leader in Public Seating • Grand Rapids 2, Michigan
Branch Offices and Distributors in Principal Cities
Manufacturers of School, Auditorium, Theatre, Church,
Transportation, Stadium Seating, and FOLDING CHAIRS

MORE FLOORS ARE WASHED AWAY WITH HARSH CLEANERS

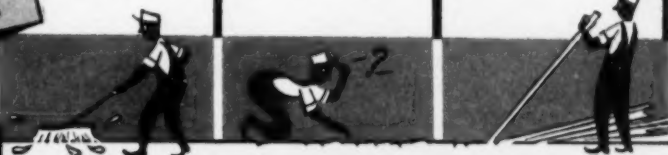
THAN ARE WALKED AWAY

BY NORMAL TRAFFIC

"Fast" deep wetting cleaners react with the oils and rob many resilient floors of natural oil, causes brittleness, fades and bleeds colors.

... often leaves a scum or powdered grit that roughens and pits hard-surfaced floors making them increasingly hard to maintain.

Permanently damaging the flooring to such an extent that it must be replaced long before its time.



DEPEND ON **SUPER SHINE-ALL**

The Neutral Chemical Cleaner

**Non-Reacting
to Any Floor!**

- Quick, non-reacting wetting
- Surrounds grime with film
- Floats and holds dirt-in-suspension for Easy Removal

Contains no free alkalis Leaves no hard-to-remove residue

and SUPER SHINE-ALL treated floors retain their original beauty through years of hardest traffic wear.

Why WASH AWAY the Life of Your Floors?



Here's How **SUPER SHINE-ALL** Achieves a Higher Standard of Sanitation without rinsing at Less Cost

1. by controlled harmless wetting action—reduces surface tension of water providing complete penetration of soil.
2. by penetrating action—gets under the dirt layer.
3. by chemical sudsing action—produces rich cleansing suds that spread out and clean thoroughly.
4. by emulsifying action—breaks up fats and oils into small particles to mix with water permitting gentle agitation instead of hard scrubbing.
5. by suspending action—lifts and suspends soil solids such as dust, soot, in liquid for easy removal.
6. by dissolving action—reduces water soluble material to solution.



YOUR CLEAN-UP NEEDS AT A GLANCE...
New Hillyard CHECK LIST
Inventories supplies. Helps Plan a Work-Saving Program of floor maintenance.

... on your staff not your payroll

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Proprietary Chemists, St. Joseph, Mo.

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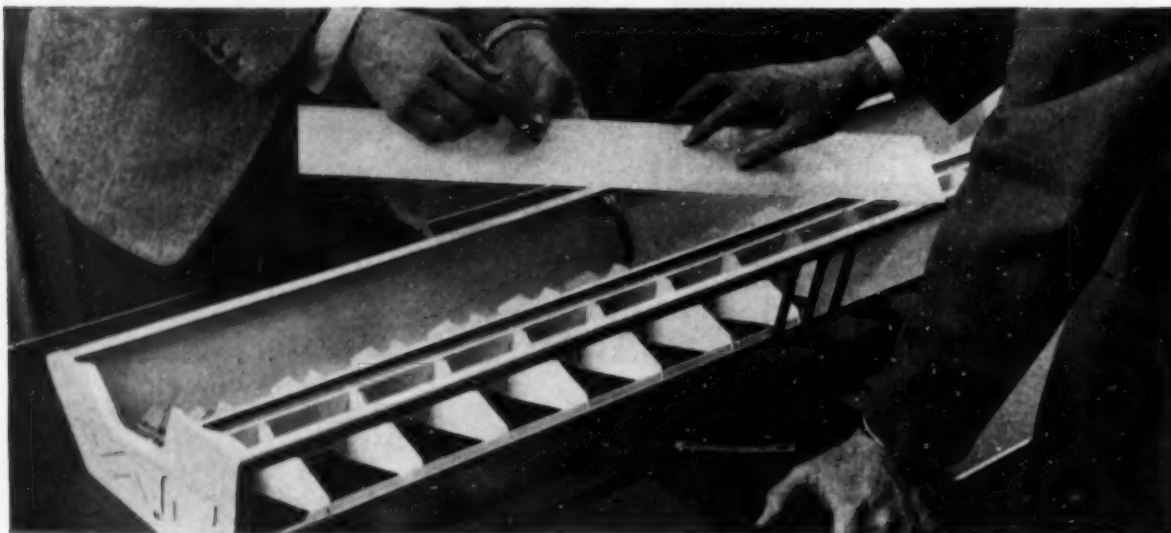
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Please send my free copy of Hillyard's new maintenance check list to:

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How to know which is your best lighting fixture buy when the sales stories sound alike



Don't guess when you buy lighting fixtures. Don't gamble with your investment by relying only on sales stories and catalog pictures.

Insist on examining the actual fixtures yourself. Handle them personally. Compare them. *Feel* the difference in quality and value. You needn't be a lighting expert. A good fixture tells its own convincing story. A poor one quickly reveals its flaws.

We hope you will consider Day-Brite's VIZ-AID or others in the complete Day-Brite line for your school lighting needs. *We* know Day-Brite fixtures give you more for your money. The important thing is for *you* to know. We urge you to *feel* the difference before you buy.

Day-Brite Lighting, Inc., 5452 Bulwer Ave., St. Louis 7, Missouri. In Canada: Amalgamated Electric Corp., Ltd., Toronto 6, Ontario.



THE DAY-BRITE VIZ-AID®

One of the most imitated fixture designs on the market, the famous VIZ-AID is the industry's standard for low cost, high performance and smart appearance. Available in 4 ft. sections for two and four 40-watt Rapid Start Fluorescent lamps. All-white finish or with Alzak aluminum center "V" louver. Handsome plastic side panels, interlocked louvers, easy to clean and relamp.

SEE YOUR LOCAL ELECTRICAL CONTRACTOR

LOOK AT DAY-BRITE'S VIZ-AID®... FEEL THE DIFFERENCE... BEFORE YOU BUY!

WHAT'S NEW

April 1954

Edited by Bessie Covert

TO HELP you get more information quickly on the new products described in this section, we have provided the postage paid card opposite page 100. Circle the key numbers on the card which correspond with the numbers at the close of each descriptive item in which you are interested. COLLEGE and UNIVERSITY BUSINESS will send your requests to the manufacturers. If you wish other product information, just write us and we shall make every effort to supply it.

Variety of Film and Methods Offered in Recordak Microfilmer



Known as the Supermatic, the new Recordak Microfilmer offers three methods of microfilming, five different reduction ratios and a choice of 16 mm or 35 mm film. Standard, duo or duplex microfilming is available with the new machine which has interchangeable lens assemblies for the film unit for various reduction ratios.

An improved, precision-built automatic feeder built into the Supermatic will feed over 500 small card sized records or 200 letter sized documents per minute. All operating features and controls are located above desk level for convenience. A single switch sets all parts of the machine in operation. There is desk-height work space for assembling documents prior to microfilming. Eastman Kodak Company, Rochester 4, N.Y.

For more details circle #302 on mailing card.

All Sound Facilities Provided in New System

Full dual-channel all-program facilities, plus inter-communication, are available in the new Rauland S260 Central Control Sound System. Designed for college and other institutional use, the system provides full distribution for up to 160 rooms, of microphone, radio, phonograph and recorder programs, with simultaneous two way communication between any room and the central control console.

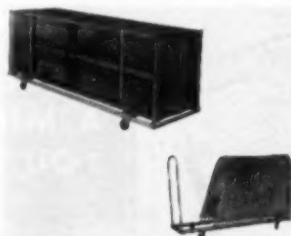
The two program panels provided can be used to select any two of six microphones and to mix them as desired, or mixes one microphone with radio, room-return or any one of four programs. Two FM-AM radios are supplied, a switch panel for selecting any or all

rooms for program distribution, master control providing two-way conversation with any room, and a transcription player for records of all sizes and speeds. Optional equipment includes record changer and tape recorder. The system is also available in the S160 single channel model. Rauland-Borg Corporation, 3515 W. Addison St., Chicago 18.

For more details circle #303 on mailing card.

Folding Tables and Chairs Easily Moved or Stored

A new line of trucks for moving and storing folding tables and chairs facilitates handling and permits storing in any convenient unused area. The Transport-Storage series trucks are electrically welded, all steel construction. Four swivel casters permit the trucks to be moved in any direction or turned in a circle only slightly greater than the length of the truck. Rooms can be set



up or cleared in a minimum of time when tables and chairs are moved on the new trucks. The Monroe Company, 77 Church St., Colfax, Iowa.

For more details circle #304 on mailing card.

Provide Pencils and Make Money

The new Automatic Pencil Vendor offers a convenience to pupils and teachers by making a pointed pencil immediately available for five cents. At the same time, the institution can earn funds for athletic teams or other groups or projects. Pencils come in school colors with the school name imprinted. The vending machine is of foolproof design with only two moving parts. It requires no upkeep and can be serviced by students. It is 16½ inches high, 6½ inches deep and 10½ inches wide. It can be installed in any handy location. Reliance Pencil Corp., 22 S. Sixth Ave., Mount Vernon, N.Y.

For more details circle #305 on mailing card.

Improved Models of Two Dishwashing Controls

Two new Wyandotte dishwashing controls are now being made available in improved form. The Wyandotte Hydro-Feeder is a simplified, easy to install appliance which automatically feeds washing powder into any make of dishwashing machine. It is now manufactured only in stainless steel to ensure long life.

The new improved model of the Wyandotte Solution Controller registers the amount of detergent required. Indications are simple: "Add," "O.K.," or "Too Much." The meter is adapted to every make of dishwashing machine and can be used alone or in conjunction with the Hydro-Feeder. The cone-shaped dip cell has stainless steel, self-cleaning contact points. It is made of highly resistant materials for long service. Wyandotte Chemicals Corporation, Wyandotte, Mich.

For more details circle #306 on mailing card.

Fast Action Collator for Table Top Operation

Fast action and smooth, dependable operation are offered in the improved Thomas Table Top Collator. The new unit employs the tilted bins, Ejectomatic Feed and ball bearing mechanism found in large floor models. Pages to be collated are stacked into bins and the collating cycle is controlled by a hand lever which can be located on either the right or the left side of the unit. Rubber tipped "fingers" push the top sheets of each stack into the operator's hand. All papers are always before the operator for constant inspection.

The table unit occupies only 16 by 27 inches of desk space and is available in



both five and eight bin capacities. Thomas Collators, Inc., 30 Church St., New York 7.

For more details circle #307 on mailing card.

What's New . . .

Water Tumblers of Clear Plastic

"Don-ite" plastic is used to make new water tumblers which are practically unbreakable. The tumblers bounce, if dropped, and are virtually chipproof. The specially formulated plastic is tough, crystal-clear, light and strong. The tumblers are formed in an attractive, fluted design which helps prevent scratching. They can be washed in any commercial dishwasher and withstand temperatures of 180 degrees. **Edward Don & Company, 2201 S. La Salle St., Chicago 16.**

For more details circle #308 on mailing card.

Sculpture Form Used in New Seating



A group of modern, attractive seating pieces has been designed by Joe Adkinson for Thonet. Conveying the feeling of "sculpture and suspension," the pieces have wood frames gracefully shaped. The

seating units are set into the frame in such a way as to seem to be floating on air although firmly supported by the frame. Pieces in the same design are available with one seat, two seats and three seats. The two and three seaters feature self-contained separate seats for each person rather than a continuous seating surface. Seats and backs are filled with 4 inch molded foam rubber and soft goods or plastics are available as covers. The wood frame is available in natural, maple, walnut, mahogany or black enamel finishes. **Thonet Industries Inc., 1 Park Ave., New York 16.**

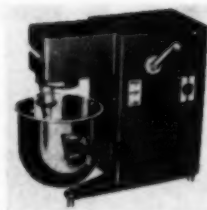
For more details circle #309 on mailing card.

Fiberglass Reinforcement in Easy-Tite Faucet Washer

Two improvements have been made in the Easy-Tite Faucet Washer as a result of years of tests and research. Fiberglass, which is unaffected by varying temperatures, has no stretch and high tensile strength, is used in the washers for long wear and resilience. A special compound developed by du Pont which has high resistance to extreme hot water and is impervious to all water impurities is also used in the improved Easy-Tite washers. **J. A. Sexauer Mfg. Co., Inc., 2803 Third Ave., New York 55.**

For more details circle #310 on mailing card.

(Continued on page 90)



Bench Type Mixer Handles 20 Quarts

The Univex Model 1220 Food Mixer features a planetary action principle of operation. The mixing unit revolves on an axis as it spins, assuring a clean complete mix of all ingredients. It has an automatic timer and triple-duty control switch for positive control of mixing time.

The low cost, efficient, multiple purpose mixer has a capacity of 20 quarts. It has power outlets which can be utilized for meat chopping, shredding, cutting and other attachments. It is a bench type mixer constructed of heavy duty welded steel, Duco finished. It is designed with a minimum of parts so that maintenance cost is low. The mixer is also available with a heavy steel stand equipped with legs to raise it off the floor for cleaning. **Universal Industries, 360 Mystic Ave., Somerville, Mass.**

For more details circle #311 on mailing card.



Women are discreet instinctively. The modern powder room is equipped with the SANIBAG method of quick, modest disposal of sanitary napkins. SANIBAG service is practically a must in motels, schools, hotels, restaurants and public buildings.

SANIBAG service not only pays off in good will, but with dollars saved in maintenance costs. Also a tremendous saving in plumber's bills arising from toilet stoppages. To provide SANIBAG service is simply good business judgment.

When writing for free samples and complete information, please include the name and address of your supply merchant.



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100 SOUTH GREEN STREET
CHICAGO, ILLINOIS

**MAKE 120 BRIGHT COPIES
A MINUTE OF ANYTHING
YOU TYPE, WRITE OR DRAW**



... no stencils, no mats,
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**5 COLORS
at once**



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More Than 4 Million Pupils in 35,000 Schools Are Taught With The Aid Of Ditto



this one dormitory unit
fits student needs

day and night

New Beautyrest Sleep-Lounge

by SIMMONS



Beautyrest Sleep-Lounge fits attractively into space-saving corner arrangements—minimizes furnishing and housekeeping requirements.

By day it's a handsome chaise or sofa. But simply removing the bolsters and tailored slip cover turns it into an inviting headboard bed. With the new Beautyrest® Sleep-Lounge, one dormitory room fits student needs for both study and sleep—perfectly and economically.

The basic unit consists of an angle-iron frame and firm No-Sag Spring, equipped either with famous Beautyrest Mattress or Dorm Bilt, a fine standard inner-spring mattress. Accessories include headboard, tailored slip cover, and bolsters. Get full details from your supplier today, or mail coupon for information.

*Trade-mark Reg. U.S. Pat. Off.

SIMMONS COMPANY
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DISPLAY ROOMS

Merchandise Mart, Chicago 54 • One Park Avenue, New York 16
295 Bay St., San Francisco 11 • 353 Jones Ave., N.W., Atlanta 1
8600 Harry Hines Blvd., Dallas 9

SIMMONS COMPANY
Contract Division
Merchandise Mart Plaza, Chicago 54, Illinois
Please send full details on Sleep-Lounge

Name.....

Address.....

City..... Zone..... State.....

What's New ...

Vibration-Motor for Spatula Dispensing

The spatula has been combined with a midjet vibration motor to add accuracy to laboratory weighings. Particles can be dropped singly, in a stream or in rapid bursts quickly and accurately with the Fisher Vibro-Spatula. The motor fits easily into the user's hand and vibrates a stainless steel spatula sixty times a second. Fisher Scientific Co., 717 Forbes St., Pittsburgh 19, Pa.

For more details circle #312 on mailing card.

Individual Room Heat Control With SelecTemp System

The Iron Fireman SelecTemp heating system has been used in various types of buildings for the past three years. This research and testing have proved so satisfactory that the system is now being put on the market nationally.

The system features a thermostat in every room and continuous circulation of filtered warm air. Each heater is a fully automatic unit, consisting of a copper heat exchanger, steam turbine driven fan for circulating room air, air filter, and a self-contained non-electric thermostat. It is designed to compensate for lower outdoor temperatures and for indoor heat, including sunlight and body radiation. Temperatures suitable for



each room or area are automatically held at the designated degree for greatest comfort. The recessed wall units require no floor space and can be finished to harmonize with any interior color scheme. The thermostats require no wiring and circulating air is cleaned by a removable spun glass filter.

The individual SelecTemp room heating units operate independently and thermostats can be set at any temperature from 40 to 90 degrees. The system can be economically installed in both new and existing buildings. Fuel is saved through reduced temperatures in unused areas and the elimination of overheating. Iron Fireman Manufacturing Co., 3170 W. 106th St., Cleveland 11, Ohio.

For more details circle #313 on mailing card.

(Continued on page 92)

Heavy-Duty Cleaner Incorporates Three Units

The BWD-18 is a heavy-duty wet-dry vacuum cleaner that incorporates three versatile cleaning units. The 1 h.p. universal type by-pass motor may be removed easily for use as a portable vacuum to reach difficult areas. It can also be used as a blower for cleaning motors and machinery. The portable unit, known as the Porta-Vac, and the blower can be used with a full line of attachments for special jobs. The motor is polished aluminum and the tank on the new model has a special alkali and rust resistant baked enamel finish. Clarke Sanding Machine Co., Muskegon, Mich.

For more details circle #314 on mailing card.

Stormrak Holds Rubbers and Umbrellas

A new rack has been developed for handling rubbers, overshoes and umbrellas without fuss or muss. There are eight openings for umbrellas and three shelves for overshoes and rubbers. The racks provide a neat method of handling storm accessories while protecting floors. They are built of heavy gauge welded steel and have removable pans to accumulate drippings. Vogel-Peterson Co., 1127 W. 37th St., Chicago 9.

For more details circle #315 on mailing card.

100 DIFFERENT SIZES, STYLES OF BULLETIN BOARDS AND CHANGEABLE LETTER BOARDS

BY DAV-SON

A Dav-Son board for every job. Changeable letter directory and announcement boards, black boards, menu boards, others. Sturdily constructed, every Dav-Son board is built to last, with quality built-in for years of service.

Dav-Son Changeable Letter Directories for Lobby, Office, Outdoor Use.

- Wide Variety of Styles and Sizes
- Glass Enclosed Front
- Hardwood or Metal Frames
- Highest Quality Felt
- Absolutely Warpproof
- Also Available with 5" 9" Standards

Dav-Son Genuine Self-Sealing Cork Bulletin Boards

- Indoor and Outdoor Styles
- Hardwood or Metal Frames
- With or Without Locking Glass Doors

World's Largest Selection

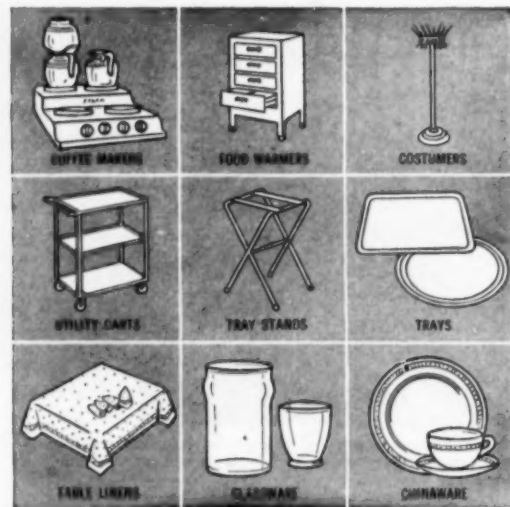
DEALER INQUIRIES INVITED
If Your Dealer Can't Supply,
Order Direct

J. F. HESTER

A. C. DAVENPORT & SON, INC.
311 N. DESPLAINES STREET, CHICAGO 6, ILLINOIS, DEPT. CB
INSIST ON DAV-SON—YOUR BEST BUY!



Dav-Son Changeable Name Plate
Black card with white letters under beveled plexiglass shield. Triangular wood base in choice of Walnut, Oak, Mahogany, Blonde or Steel Grey Finish. 10 1/4" x 3 1/4"



Just 9 of 50,000 Items ...

... used daily in every well-run kitchen are shown above as examples of the food preparation and service equipment sold by DON. Your DON salesman can show a lot more that will help you do more ... with less work, less waste and in less time. On all the 50,000 items, satisfaction guaranteed or your money back.

Ask your DON Salesman

or write Department 6

1400 N. Miami Ave.
Miami 32

27 N. Second St.
Minneapolis 1



2201 S. LA SALLE ST. CHICAGO 16

The Original TABLET ARM CHAIR THAT FOLDS

IMITATED BUT UNEQUALED

• Only *Clarin* chairs can be used equally well for ordinary seating . . . with the arm folded down at the side.

• Only *Clarin* chairs let you lift the arm out of the way as you sit down or stand up.

• Only *Clarin* chairs are engineered and built to Clarin standards of strength and quality.

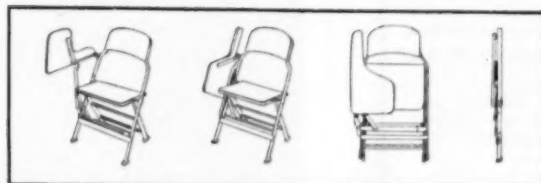
Write for full information:

Clarin Mfg. Co., Dept. 9,
4640 W. Harrison St.
Chicago 44, Illinois



Foam rubber cushioning a CLARIN PLUS feature.

FOLDS FLAT IN 3 EASY STEPS



Clarin

There is a Clarin Steel Folding Chair for every age from nursery school to adult—and for every need—the only complete line made. Write for Free Illustrated Catalog.

ENGINEERED QUALITY MAKES THE BIG DIFFERENCE IN FOLDING CHAIRS

What's New ...

Selective Hold-Open for Rixson Door Closers

A selective hold-open mechanism can now be built into Rixson floor type,



heavy duty door closers. The degree of hold-open is set at the factory to function at any point specified. When the "selector lever," easily accessible on the floor plate or threshold, is set, it places the automatic hold-open mechanism in contact position to hold the door whenever it is opened to the hold-open setting. A firm pull releases the door. The automatic hold-open does not function when the lever is set at non-contact position and the door closer functions normally, bringing the door to a quiet, gentle close.

Rixson Selective Hold-Open Door Closers are especially suited to entrance doors where large crowds pass through periodically, as dismissal time at school or university and in auditoriums and gymnasiums. When crowds are heavy the selector lever is set for hold-open. The door is swung open and held, move-

ment of crowds is facilitated and wear and tear on the door mechanism minimized. The selective hold-open can also be used in keeping doors open during warm weather. **The Oscar C. Rixson Company, 4452 W. Carroll Ave., Chicago 22.**

For more details circle #316 on mailing card.

Liquid Detergent for Cleaning Glassware

Laboratory and clinical glassware can be cleaned effectively with the new 7X Detergent. It is a concentrated liquid which comes in standard, factory controlled strength and is not influenced by local storage conditions or mixing practice variations. It is prepared by simply mixing with water. Glassware is quickly and easily cleaned. Laboratory glassware rinses clean without salts or sediment desposits or adherence, according to the manufacturer, when washed in 7X. **Linbro Chemical Co., 681 Dixwell Ave., New Haven 11, Conn.**

For more details circle #317 on mailing card.

Indoor Running Track for Track Training

Runners can be trained at close range as they run on the new running platform recently developed for indoor training.

The Indoor Track Trainer occupies a minimum of space, being 12 feet long and 24 inches wide. It is placed 18 inches from the floor level. A flat rubber belt runs on a heavy, flat metal plate. The driving pulley is connected to a variable speed electric motor which gives a belt speed range from 194 to 1320 feet per minute. This gives an approximate range from a 60 second quarter mile base to a slow walk, permitting the runner to practice at any chosen pace. A special speedometer shows the belt speed.

The Indoor Track Trainer closely simulates actual track conditions. It is effective in teaching form and pacing, developing endurance and for research work in physical education. It permits



the coach to do more effective training with less effort. **Barber-Greene Co., 400 N. Highland Ave., Aurora, Ill.**

For more details circle #318 on mailing card.

(Continued on page 94)

**LIFTS DIRT ...
HOLDS IT OFF...**

CINDET

100% ACTIVE 100% SAFE!

NEW LIQUID SYNTHETIC DETERGENT

CINDET can be used in hard or soft water for the hundreds of cleaning needs throughout your school or college buildings. It **LOOSENS** dirt quickly, **LIFTING IT AWAY** and **HOLDING IT IN SUSPENSION** in a mass of creamy suds. Removes stubborn stains, rubber marks.

CINDET works fast, dries quickly, can be used safely on anything water itself won't harm—including the user's skin. Use CINDET to strip old water emulsion waxes from floors quickly and surely, **AND FOR ALL GENERAL CLEANING PURPOSES.**

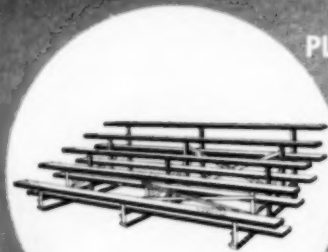
CINDET is approved by the Rubber Manufacturers' Division of the Rubber Manufacturers' Association.

Write for Dolge literature on CINDET, and have your **DOLGE SERVICE MAN** demonstrate its easy, economical use.

**FOR FREE
SANITARY SURVEY
OF YOUR SCHOOL
CONSULT YOUR
DOLGE SERVICE MAN**

DOLGE
WESTPORT, CONNECTICUT

move BLEACHER SECTIONS without dismantling



PLAYTIME offers

**added
value
for your
seating
dollar**

Only Playtime offers the exclusive Welded Steel Panel that gives you a stronger, more versatile Bleacher. Because the Welded Steel Panel is factory-welded there are fewer parts to assemble. There is no chance for these vital connections to work loose. The Bleachers are easier to assemble and align.

The assembled rigid steel framework permits you to move and rearrange your seating quickly and easily without dismantling your Bleacher sections. Dollar for dollar you can't buy more in any Bleacher. Write for details—there is no obligation to you.

"It's the PANEL that makes the DIFFERENCE"

PLAYTIME EQUIPMENT CORP.

MARS, PENNSYLVANIA



*You can help your students to
protect their tuition investments
by offering them the*

TUITION REFUND PLAN

Sickness or accident often deprives a student of class time that has been paid for, or contracted for. Such a loss may be a fatal blow to a family's educational plans.

The Original Tuition Refund Plan repays such losses. Its moderate cost is paid for by the student and refunds are made through the college. The college, while sharing in the advantages of the Plan, is under no expense. Participation is optional and there is no required minimum.

This Plan has been in use for 23 years and is now offered to students in 289 schools and colleges. Recently the new "Broad Form," which extends the original protection, has been made available in many states. The Broad Form also covers absences and withdrawals for medical reasons and, in addition, voluntary and involuntary withdrawals for scholastic, disciplinary, family and many other reasons.

In the interest of your students' welfare and the businesslike conduct of your college affairs, you should know all about these two Plans. Write to us telling us your enrollment terms, number of students and fees and which of the Plans you would prefer so that we can make a proposal suited to your needs.

A. W. G. DEWAR
INCORPORATED

Educational Insurance Underwriters
141 Milk Street BOSTON Massachusetts

DOUBLE DUTY



...at DESKSIDE

Most of us take a waste basket for granted. It's where it is, simply to do a necessary job.

But a waste basket is *also* a piece of furniture. And as such, it must be attractive and durable, just as any chair, desk or fixture in office or classroom.

VUL-COT waste baskets are eye-pleasing—and they're built to take the worst kind of punishment. These hard vulcanized fibre baskets won't chip, split, splinter, rust or corrode, can't be dented. Standard colors—maroon-brown or olive-green—are blended into the fibre . . . they will not chip, wear off, or mar furniture or clothing. Double-rolled tops remain smooth and round for life of baskets. Bonded seam construction adds strength. Small wonder every VUL-COT is backed up by a five-year guarantee!

VUL-COTS are light in weight, noiseless, easy to clean and handle. You can get them in a wide variety of models and sizes at stationers and school supply houses everywhere. Or write for catalog price sheet. Dept. U-4.



NATIONAL
VULCANIZED FIBRE CO.

WILMINGTON 99, DELAWARE

What's New ...

Folding Stage Is Readily Portable



Made in sections, the new Rol-Fol Folding Stage is designed to fill the need for a wide variety of uses. It can be used individually or units can be joined together into one larger stage unit. The stage folds easily and compactly and it is designed for use in cafeterias, gymnasiums and multi-use rooms. Stage sections are 3 feet wide by 6, 8, 10, 12 and 14 feet long. Standard heights of the new folding stage are 16 and 24 inches.

Stage sections are easily detachable for arrangement as individual platforms and choral stands. They can be arranged to form speakers' platforms or raised seating facilities. Tops of each section are constructed of Douglas fir flooring banded by a steel angle frame. Open web trusses supporting the platforms are

mounted on swivel casters with non-marring rubber wheels for easy mobility. Rubber tipped floor stops are set against the floor to prevent slipping when a fixed position is required. Rol-Fol Table, Inc., 8467 Melrose Place, Los Angeles 46, Calif.

For more details circle #319 on mailing card.

Streamlined Design in "Baker Boy" Oven

The new 1954 "Baker Boy" series ovens have been streamlined in design and engineering. The chain drive transfers an even flow of power from the drive to the reel, with no jerky stops and starts. A new development makes it easy to adjust the chain after years of service. Enclosed chain drive and shaft bearings are outside the heat zone. Bearings inside and in the heat zone require no oiling.

The ovens have rounded corners, porcelain panels and polished aluminum trim, top and bottom, with attractive appearance and ease of cleaning. Doors are light weight aluminum with frames of heavy gauge stainless steel. Standard equipment includes a built-in shelf indicator. The ovens are available for gas or electric heating systems. Despatch Oven Co., 619 S. E. 8th St., Minneapolis 14, Minn.

For more details circle #320 on mailing card.

(Continued on page 96)



Air-Foam Seat on Folding Chair

Added comfort is offered in the Lyon steel folding chair by the addition of a Goodyear Air-Foam seat pad. The 1/4 inch pad is covered with durable, long-wearing upholstery in Sienna Brown. The chair combines beauty and comfort with maximum durability. The back is curved to fit the body comfortably. The wide, curved seat is deep enough to accommodate any sized person with comfort. The channel steel frame is designed to withstand strain and the chair has live rubber feet to protect floors and prevent slipping. The chair is available with walnut or taupe finished frame and back, in 17 or 18 inch heights. Lyon Metal Products, Incorporated, Aurora, Ill.

For more details circle #321 on mailing card.

"WALL-SAVER" Chairs

- PREVENT DAMAGE TO WALLS
- REDUCE CHAIR MAINTENANCE

The back legs of a "Wall-Saver" chair are flared out so that the chair cannot be tipped backwards. No rubber leg bumpers are needed—the bottoms of the legs abut the baseboard while there is still ample clearance between the back of the chair and the wall. This unusual design eliminates the strain to which an ordinary chair is subjected when the sitter "rocks" in it. It also prevents damage to both chair and wall caused by "resting" the back of the chair against the wall. As a result, "Wall-Saver" chairs can pay for themselves through savings.



Right: No. 1082 "Wall-Saver" Easy Chair.

Left: No. 1089 1/2 "Wall-Saver" Straight Chair. (Also available with saddle wood seat, or with upholstered seat and back.)



Write for Bulletin 1005-A

"WALL-SAVER" Advantages

1. CANNOT BE TIPPED BACKWARDS
2. CHAIR CAN'T DAMAGE SIDE OR BACK WALL

FICHENLAUBS
For Better Furniture
2301 BUTLER ST., PITTSBURGH 1, PA.
ESTABLISHED 1873

Neumade

PROTECTS
YOUR
FILM!



ALL STEEL COMBINATION STORAGE UNITS

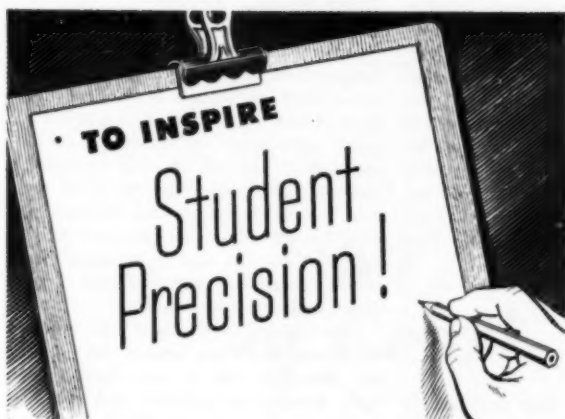
YOU CAN BE SURE that your stored films will be safe from dust, heat or dryness with NEUMADE COMBINATION STORAGE UNITS!



Model MM 119—A practical storage cabinet for the varied film library. Holds 400, 800, 1200, 1600 ft. reels; 100 filmstrip cans plus utility drawer in base. Over-all size: 30" wide, 70" high, 16" deep. Over 30 models to choose from. Write for free catalog.

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Preferred by instructors because they inspire students to new achievements . . . WESTON instruments also are the choice of practical administrators because their ruggedness and year after year dependability make their cost remarkably low! Ask for bulletin listing all instruments.

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614 Frelinghuysen Avenue, Newark

For Advanced Requirements MODEL 622



Ultra sensitive instruments of the double pivoted type requiring no leveling when used in horizontal position. Combine high accuracy and a 6.1 inch scale . . . ideal for precise measurements of potential and current at very low energy levels. Available as d-c voltmeters, millivoltmeters, milliammeters and microammeters; electrolysis volt-millivoltmeters and high resistance voltmeters—also as a-c rectifier type instruments and as thermocouple ammeters, milliammeters and voltmeters.

For Electrical Machinery Labs MODEL 633

A clamp-on volt-ammeter built to Weston standards of safety, accuracy and dependability. Five full scale a-c current ranges of 1000/250/100/25/10 amperes with range overlap. Three self-contained a-c voltage ranges of 700/350/175 volts—insulated for 750 volts. Has convenient 6 position switch easily operated by thumb—adjustable pointer stop facilitates measuring starting current of motors.



WESTON

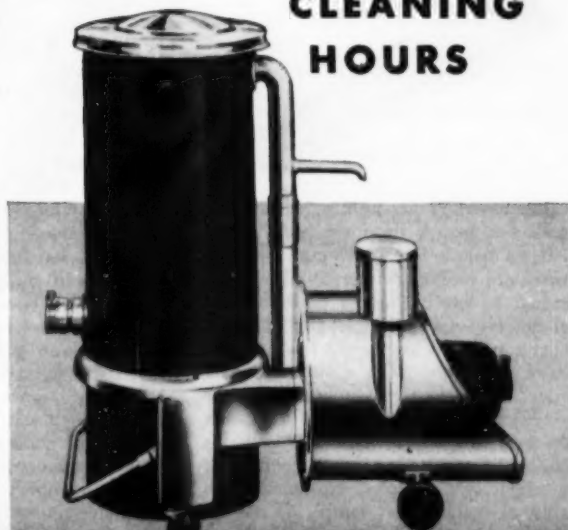


Instruments

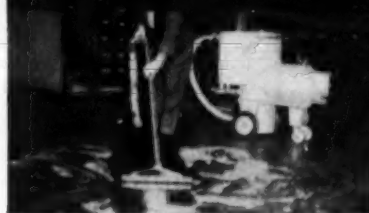
Vol. 16, No. 4, April 1954

SPENCERS'

GREATER VACUUM POWER MAKES THE MOST OF CLEANING HOURS



Designed and built for professional cleaning by the country's foremost vacuum cleaning experts. Spencer Portables, by actual test, pick up 6 times as much dirt as manual sweeping and in less time. To get the most out of your cleaning hours, give the operator an easy-to-use, powerful, efficient Spencer. You'll see the difference.



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Please send my copy of A GUIDE TO EASIER CLEANING

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Street & No.

City & State

What's New...

Low Surface Brightness With Cavalier Luminaire



The new Cavalier lighting fixture features full length luminous side panels with no opaque metal framing. The side panels are supported internally by a steel frame. A low brightness finish is used on louvers, side reflectors and channels to give uniform low brightness over the entire luminaire. The entire unit provides low surface brightness above the specified 45 degree shielding angle. It has been designed to meet the needs for school lighting and is available in four or eight foot lengths, equipped with rapid or instant start lamps.

An adjustable ceiling strap which adjusts for either out-of-line or in-line error in location of mounting points is one of

the mechanical features of the Cavalier. A hook-on stem assembly permits speed and ease of mounting and a sliding stem plate within the channel provides mounting in any desirable point. The unit may be mounted on the surface, on five or twenty inch stem and canopies, or for individual mounting. Louvers are lowered by means of press buttons and are supported by safety chains when lowered. The F. W. Wakefield Brass Co., Vermilion, Ohio.

For more details circle #322 on mailing card.

Plastic Rope Floats on Pool

A rope which will float indefinitely and which does not deteriorate, even in salt water, has been introduced. It is both decorative and practical and is made of polyethylene spun film. It is designed for use as pool barriers, to mark off competition swimming lanes or restricted wading areas, as tows, for beach and pool life lines and other uses. It is resistant to salt air, chlorine, fungi, mold or rot and most soiled areas can be wiped clean with a damp cloth. The new plastic rope is light in weight and is available in white or colors. U. S. Plastic Rope Inc., 2581 Spring St., Redwood City 3, Calif.

For more details circle #323 on mailing card.

(Continued on page 98)

Three Models Added To Lighting Plant Line

Super-excited generators with two pole design directly attached to the engine crank shaft are features of the new Katolight plants. The three new models recently introduced are versatile machines generating standard 60 cycle alternating current. The engine on the 1350 watt size is a 9 FB Briggs and Stratton air-cooled model. The complete unit weighs only 146 pounds and is equipped with rubber mounted type isolators, receptacles and carrying handles.

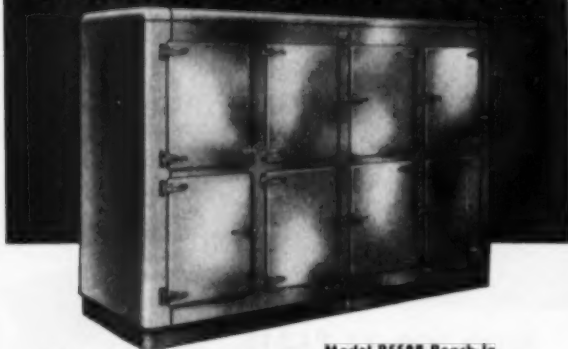
The engines in the new unit are run on kerosene. When desired the engines are arranged with a two compartment tank starting on gasoline and running



on kerosene. The new series is available in several capacities. Katolight Corp., 624 North Front St., Mankato, Minn.

For more details circle #324 on mailing card.

Herrick's Rugged Durability Assures GREATER DOLLAR VALUE



Model R558B Reach-In

HERRICK® STAINLESS STEEL REFRIGERATORS

Years of trouble-free service are built into every HERRICK Refrigerator. Sturdy, slam-shut door latches... long lasting ball-bearing hinges... an oversize Filter-pure cooling coil... these and other superior features assure maximum life and operating economy... give you more for your money when you buy HERRICK. Write for the name of your nearest HERRICK supplier.

*Also available with white enamel finish.

HERRICK REFRIGERATOR CO., WATERLOO, IOWA
Dept. C., Commercial Refrigeration Division

HERRICK *The Aristocrat of Refrigerators*

No. 315 UNIVERSITY TABLET ARM CHAIR.

Ideal for class
or lecture room



DESIGNED
FOR
VALUE!



- Solid hard maple seat—saddled for comfort.
 - Large solid maple tablet arm—in proper writing position.
 - Heavy cast metal pedestal—non-flexing—stays put.
 - Available with underseat bookrack.
 - Suntan color—finished in tough scratch resistant "Celwyn".
 - Available with Fibresin plastic tablet arm
- "No One Ever Regretted Buying Quality"

PEABODY SEATING COMPANY, INC.
NORTH MANCHESTER INDIANA

1,584,000 feet of film and...

**no
sign
of wear!**



***New Filmosound Specialist
with Sapphire jewel parts
cuts maintenance costs!***

Television station WSPD-TV in Toledo, Ohio, started using the heavy-duty Filmosound Specialist 16mm recording projector on November 6, 1952. Twenty-four weeks later—after 1,584,000 feet of film had been shown with this Specialist—Bell & Howell examined it to detect any signs of wear. Even under a magnifying glass not a single worn spot was visible on the critical film-handling parts!

Wear on the critical parts (shuttle, guide rail, and film tension clips) of a projector causes picture unsteadiness and costly maintenance. But the sapphire jewels in the Filmosound Specialist protect these critical parts ... ensure clear, easy-to-watch movies ... give the Specialist 400% longer life than an ordinary projector!

To meet your particular 16mm projection needs, many more exclusive features may be added to the basic unit. Filmosound Specialists are sold exclusively by your Bell & Howell Special Representative. Mail coupon for full information.

Bell & Howell

makers of the

world's finest motion picture equipment

*Filmosound Specialists are available in both
standard sound and magnetic recording models.*



Bell & Howell Company, Dept. D
7192 McCormick Road
Chicago 45, Illinois

Please send me, without cost or obligation, complete information on the Filmosound Specialist and the name of my Bell & Howell Special Representative.

Name

Organization

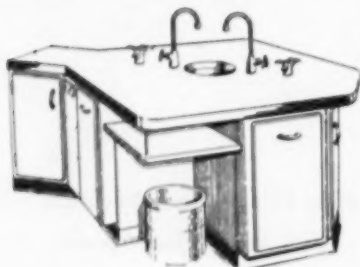
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County State

What's New ...

Versatile Science Table Convenient and Practical



A new, efficient and practical design in laboratory tables is offered in the J-105-W All-Purpose Table. This carefully thought out unit is built to serve student needs in every respect. The shape and arrangement of the table are designed to provide maximum usefulness while permitting free flow of traffic without disturbing students or interfering with their position at the table. Space is conserved and maximum wall space is available for storage.

Each table provides for four student positions, each with a storage unit arranged for equipment in trays, racks and clips, and mounted on rollers and metal guides for extension. The 12 inch diameter by 8 inch deep flat bottomed sink in the center of the table has two cold water cocks and there are two

double gas cocks on the center line of the table. A duplex electric outlet is provided on access panels on each side. There are shelves for tote trays between each student position, space for waste jars and storage cabinets for supplementary equipment. The table has been carefully designed to provide every need in minimum space, with maximum comfort and convenience. **E. H. Sheldon Equipment Co., Muskegon, Mich.**

For more details circle #325 on mailing card.

Silver King Cleaner for Wet or Dry Pickup

A new wet or dry vacuum cleaner has been developed to sell at a low cost, yet to give efficient service. The Silver King is a combined wet and dry pick-up vacuum cleaner which will handle 2½ gallons wet and over 4½ dry. It is a light weight unit which has high power and is designed for use in offices and areas where the cleaning job is limited in scope. It is of rustproof, all aluminum construction with an all rubber, non-kinking hose. The cleaner moves on sturdy, smooth-gliding casters and there are 13 cleaning attachments and accessories available to make it an all around cleaner. **Ross & Story Products Corp., Dewitt St., P. O. Box 12, Syracuse, N. Y.**

For more details circle #326 on mailing card.

(Continued on page 100)

Stainless Steel Wall Fountain Is Easy to Clean

The new SF-145 Ebco Wall Fountain is made of stainless steel with mirror finished top and satin finished skirt. It is an attractive, sanitary fountain which is easy to keep clean and inviting in appearance. It may be connected to any water supply or water cooler and is furnished with bubbler. A glass filler may be added using piped, capped outlet.

The stainless steel top has rounded corners to prevent splashing. The skirt improves appearance and sanitation, and condensation is prevented by rock wool



insulation. A stainless steel strainer and chrome plated brass waste drain are part of the fountain. **The Ebco Mfg. Co., 401 W. Town St., Columbus 8, Ohio.**

For more details circle #327 on mailing card.

...at the head of **CLASS**

HORNER

**ALL
WOOL**

**ANTI-SHRINK
DORMITORY BLANKETS**

**with your
SCHOOL EMBLEM**

Your school will be justly proud of your own special dormitory blankets by Horner . . . emblazoned with the school's initials or emblem . . . and treated by Horner's exclusive anti-shrink process which reduces blanket shrinkage 83 per cent.



Passenger Blankets — quality-selected to outfit the U.S. United States, America's finest luxury liner.

IN ANY SIZE OR COLOR

write: **HORNER WOOLEN MILLS COMPANY**
EATON RAPIDS, MICHIGAN



**PICNIC
TABLE**

Durable and firm. Comfortably seats 8 persons. Easy access—no straddling of or climbing over supports. Easily dismantled for compact storage.

Illustrated: **WELLS Picnic Table No. TP72.**

Welded frames of 1½" OD heavy steel tubing. Top and seats of 2" x 10" nominal, "B or better" marine spar treated Douglas fir. 72" long. Top 29" wide. Weight 186 lbs.

WELLS

Since 1924

6880 Troost Avenue (P.O. Box 192)
North HOLLYWOOD, California



1368-S16

molded wood seat and back

perfect line-up of side and armchair for row grouping.



engineered for public use

100th anniversary chair ... one of many innovations in Thonet's large collection of original chairs ... designed for modern beauty yet engineered* to withstand hard public use with lasting durability.

*THONET'S famous bending and molding processes eliminate troublesome glue joints.



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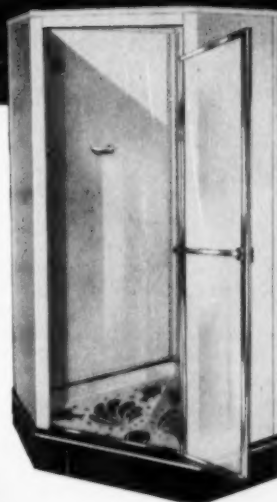


1369-SUT8-BU6

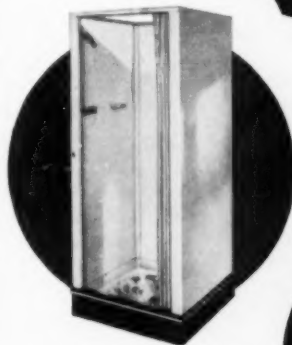
upholstered seat and back
seat 17" x 17"
special wall-saving leg design

Weisway CABINET SHOWERS

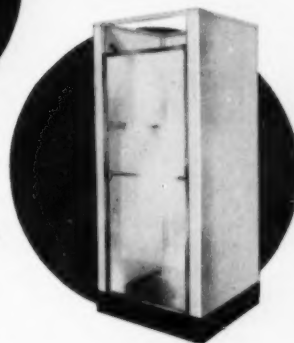
Quality Bathing Units
For Every Purpose...



Corner entrance models save floor space. *Weisway V. P. Master* has walls and receptor of vitreous porcelain enamel for finest installations. Glass doors available on all Weisway models.



Weisway Standard has four-way protection and vitreous porcelain receptor—permanently leakproof.



Leakproof quality at moderate price is provided in the dependable *Weisway Budgeteer*.

Self-contained, leakproof Weisway Cabinet Showers, easily installed in new or old buildings, provide lasting service; end trouble and expense of frequent repairs and replacements. Vitreous porcelain enamel receptor, with Foot-Grip, No-Slip floor, is safe, sanitary non-absorbent—*will not rust*. *Mail coupon* for information on the complete Weisway line.

HENRY WEIS MFG. CO., INC., 439 Weisway Bldg., Elkhart, Ind.

Please send literature and information on the complete line of Weisway Cabinet Showers.

Name

Address

City State

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What's New...

Product Literature

• **L-69 Floodlights for Sports Lighting** is the title of the new seven-page bulletin on sports lighting applications put out by General Electric, 1 River Rd., Schenectady 5, New York. The new bulletin pictures well-planned lighting in football, baseball, basketball and other sports with the numerous benefits of night sports outlined. The publication describes the construction of the G-E L-69 floodlight and offers a manual of complete floodlighting plans designed to assist colleges and universities to set up sports lighting facilities.

For more details circle #328 on mailing card.

• **"The Key to Selecting Door Closers"** is the title of an informative new brochure recently released by the Yale Lock and Hardware Division. The Yale & Towne Manufacturing Co., Stamford, Conn. Photographs and diagrammatic drawings supplement the descriptive text in describing the various types of door closers, and their functions. Accessories and their applications are also explained. Information on installation, back plates and finishes for various usages is included as are charts showing how to order the correct size door closer.

For more details circle #329 on mailing card.

• A new catalog on **Rowles School Equipment** has been published by E. W. A. Rowles Company, Arlington Heights, Ill. It covers the full line of classroom seating, school furniture and school equipment available from the company. Bound in plastic, Catalog 568 lies flat when opened at any page. It is illustrated in black and white and color, with drawings and photographs. Descriptive information on classroom seating includes details of construction and full specifications.

For more details circle #330 on mailing card.

• A complete new **photocopy information kit** has been compiled by the American Photocopy Equipment Co., 1920 W. Peterson, Chicago 26. The kit has been prepared to help the executive solve the problem of copying material with a minimum of effort. Included in the kit is a new book on the Apeco Systematic Auto-Stat copier which describes this copying development with diagrams, uses, comparison charts, applications, photographs and other data.

For more details circle #331 on mailing card.

• A guide book to better buying, longer service and more efficient use of **"Pencil Sharpeners"** has been prepared by James W. Fitch and is being made available by the C. Howard Hunt Pen Co., Camden 1, N. J. The result of a study of pencil sharpeners and their uses, the booklet gives information on many types of sharpeners, how to buy, how they should be installed, used and maintained, and other helpful data.

For more details circle #332 on mailing card.

• The construction of **Laykold and Grasstex Tennis Courts** is illustrated in a full page color chart available from American Bitumuls & Asphalt Co., 200 Brush St., San Francisco 4, Calif. The color diagrams are cross sections of the courts showing depth and type of each application.

For more details circle #333 on mailing card.

• A brochure combining the **institutional room furniture** line for institutions, manufactured by Royal Metal Mfg. Co., 175 N. Michigan Ave., Chicago 1, and the Englander Company, Inc., 1720 Merchandise Mart, Chicago 54, is now available. The two Chicago firms recently launched a cooperative sales agreement and are introducing their combined lines to the institutional field through the new booklet. Photographs and descriptive data on every item in the lines are included in the comprehensive publication, copies of which are available from either company.

For more details circle #334 on mailing card.

• How **"Saf-Aire" Automatic Gas Heating** can be adapted for use in one room or a complete building is discussed and illustrated in a leaflet issued by the U. S. Machine Division of Stewart-Warner Corporation, Lebanon, Ind. Text, photographs and drawings describe the operation of the heating unit and its installation.

For more details circle #335 on mailing card.

• **Barber-Colman Electronic Hot Water Controls** are discussed in **Bulletin F 6167** issued by Barber-Colman Company, Rockford, Ill. The catalog describes the flexibility of these controls and gives information on the use of optional night depression with morning warm-up feature.

For more details circle #336 on mailing card.

• **General Catalog No. 153** tells the complete story of White Floor Cleaning Equipment. The catalog marks the sixtieth anniversary of White Mop Wringer Co., Fultonville, N.Y., and gives full details on the new silent line of cleaning equipment as well as the full line of equipment manufactured by the company. Each item is illustrated and described and the comprehensive catalog is fully indexed.

For more details circle #337 on mailing card.

• The complete line of Harvard mobile metal bed frames and metal bed assemblies is featured in a new combined **Catalog and Merchandising Guide** published by The Harvard Manufacturing Co., 6201 Woodland Ave., Cleveland 4, Ohio. The 32 page booklet gives information on metal bed carriers and how they can be used. It is illustrated with photographs and drawings of many bed frame applications, and should be of particular interest for furnishing dormitories and personnel quarters.

For more details circle #338 on mailing card.

• The **1954 Catalog of Voit Rubber and Rubber-Covered Athletic Equipment** is now available from W. J. Voit Rubber Corp., 1600 E. 25th St., Los Angeles 11, Calif. The booklet illustrates and describes approximately 100 items. Included are new additions to the line such as the super-soft softball with a sponge rubber center, and a baseball base built on a new principle. Featured items are Voit's improved top-grade inflated athletic balls and a completely new mold design for long wear with official performance.

For more details circle #339 on mailing card.

• A new handbook on **"General Maintenance of Pneumatic Control Systems Including Unit Ventilator Service Guide"** has been released by Minneapolis-Honeywell Regulator Co., 2820 Fourth Ave. S., Minneapolis 8, Minn. The booklet discusses classroom heating conditions that cause pupil discomfort and suggests corrections. It is designed to acquaint school administrators and their custodians with details of the heating and heat-regulation systems required in modern schools, and to provide a quick source of reference material in case of trouble. The servicing of all types of Honeywell school heating controls and unit ventilating systems is covered in the handbook.

For more details circle #340 on mailing card.

• Construction facts on **"Howe Folding Tables and Benches"** are given in a catalog recently released by Howe Folding Furniture, Inc., 1 Park Ave., New York 16. Illustrations and descriptive information on folding tables, chairs and benches, and on bench and table units are given in the catalog. Action sketches on the folding bench and table unit show how easily it is opened and closed, and the various uses to which it can be put.

For more details circle #341 on mailing card.

• **Floor plans for food service departments** in various types of institutions are shown in a new booklet on designing and engineering services for food service facilities issued by J. E. Stephens Associates, Inc., 320 W. Lafayette Blvd., Detroit 26, Mich. Actual layout of kitchen and cafeteria in institutions of various sizes and types are shown as well as cafeteria counters, construction problems, types of equipment and refrigerator systems.

For more details circle #342 on mailing card.

• How office space can be efficiently divided to give privacy to workers is illustrated and described in a new catalog on **Arnot Steel Partitionettes**. This new development, by Arnot-Jamestown Corporation, Jamestown, N.Y., offers a solution to the problem of privacy for certain workers without actual reconstruction of office space. Partitionettes offer quick, easy and economical enclosures for private or semi-private offices.

For more details circle #343 on mailing card.

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Thermostat



T-901
Submaster
Thermostat



D-251
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Operator



V-103
Steam Valve

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